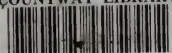


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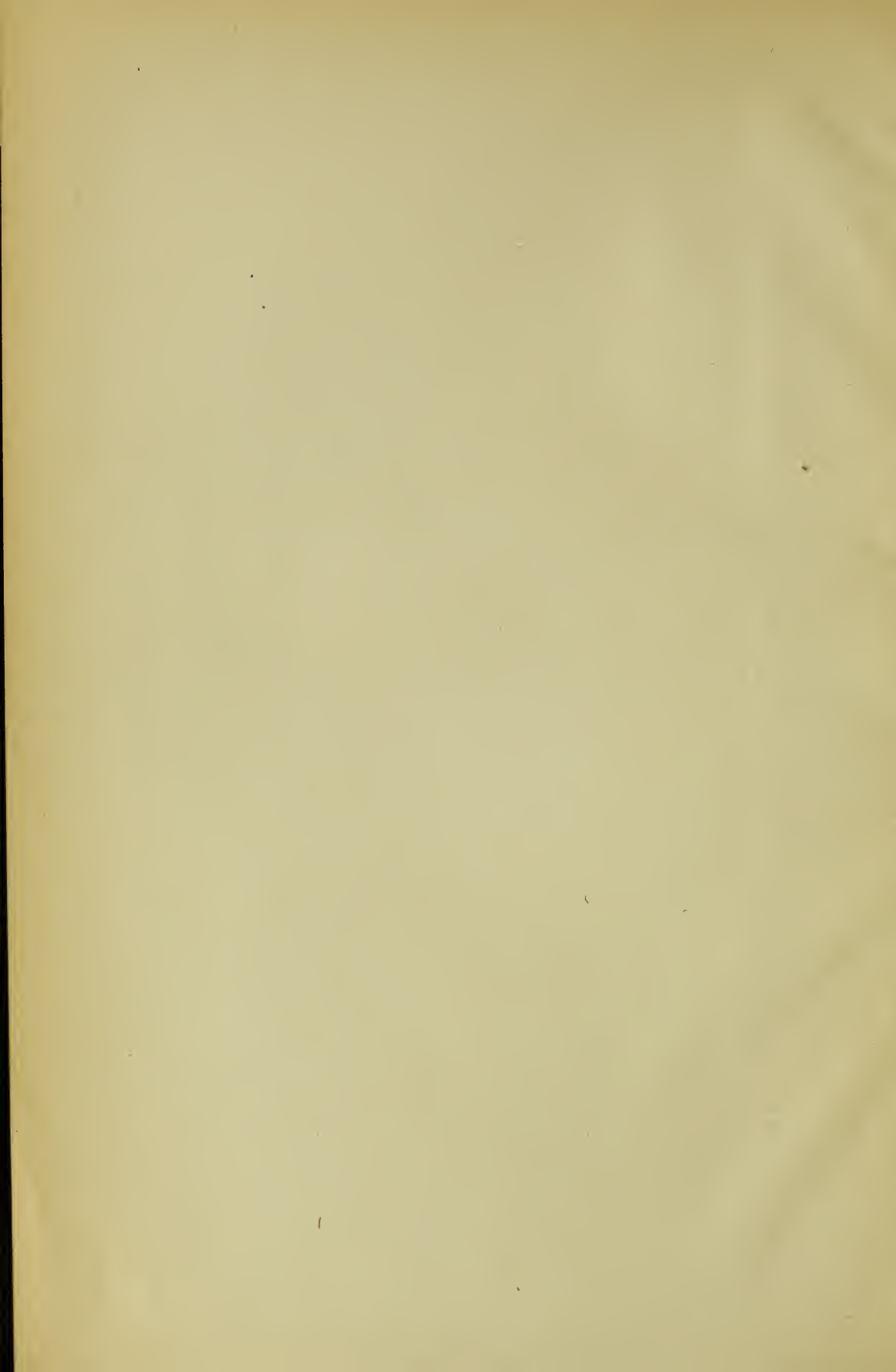


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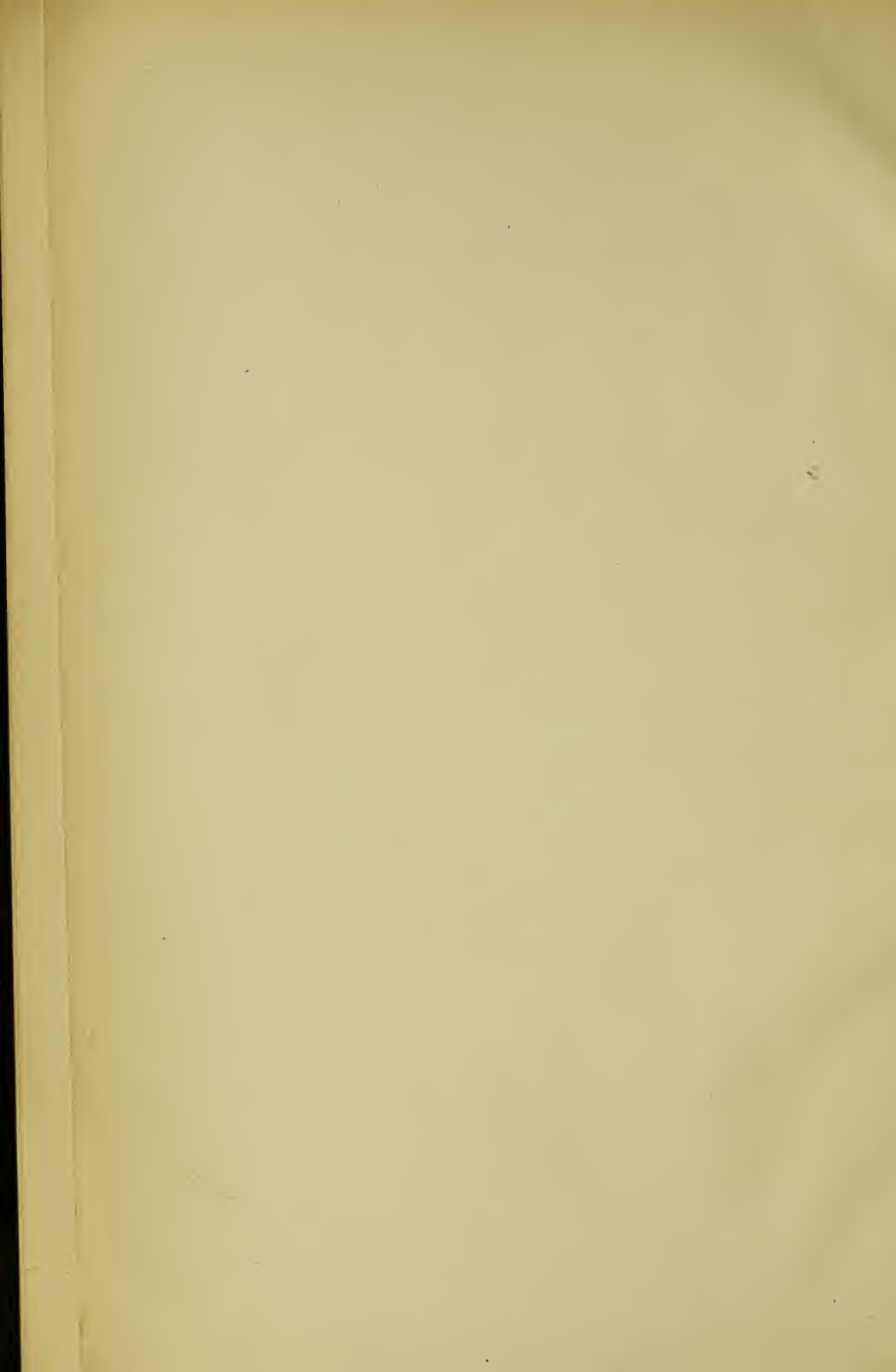

















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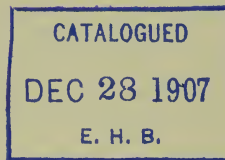
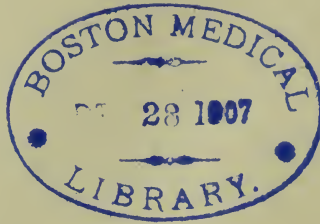
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## ORIGINAL ARTICLES

### PRESIDENT'S ADDRESS.\*

BY D. C. GORE, M. D., MARSHALL, MO.

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In this age of rabid commercialism, when men are crazed with the money idea and are bowing down and worshipping gold; when money is the sole creed and universal goal; when men are selling their very souls for sordid wealth; when the question is not what a man is, but what he is worth; when everything is measured by the alchemy of wealth; the question, *cui bono* stands at the door of every institution or organization which is projected anew or which being existent, claims the right of continuing its existence. "I am therefore, I have a right to be" no longer satisfies the practical mind, but the reason for existence must be demonstrative. This question comes with peculiar force to the Missouri State Medical Association today, for the old Missouri Medical Society and Missouri Medical Association of the last fifty years, with their fond memories, with their glorious heroes, who wrought as only heroes can, with their giants of intellect and learning, with their pioneers who blazed the way and made our conditions possible, with their dear, sweet souls, whose friendly advice and fatherly counsel have kept our feet in the straight and narrow path; whose acquaintance was an inspiration, and whose friendship was a benediction, and many of whom have gone to their reward, *eo triumphante* ringing in their ears, have passed into history and have been succeeded by the present Missouri State Medical Association, organized and constructed upon the idea of a Republic, with its different branches of government; the legislative, the judicial and the executive, and is no longer made up year by year of a heterogeneous mass of semi-volunteers, who at odd times and off and on may take a notion to attend its meetings; but is a truly representative body, composed of members selected by the various county societies, who send representatives to legislate for them in the House of Delegates, whose laws are to be construed by the Judicial Council and to be executed by its executive officer.

\*Read at the annual meeting, Jefferson City, May, 1906.

ficers, and *cui bono* may very properly be asked of it, not only by the laity, but by the members of the profession as well. My answer to the question is for the good of the state and its citizens; for the good of the Association itself, and for the good of the individual doctor. I might rest the whole answer upon the first division and make the good of the state the sole and complete answer to the whole question as being all embracive and including the other two, but as they both make up so large a part of the good of the state, and as altruism is like "The quality of mercy, it blesses him that gives and him that takes", the latter two become very important factors in the answer to the question. Almost as far back as history runs the doctor has been a prominent factor in the affairs of the race and has contributed more to its welfare, its prosperity and its happiness than any man of any other vocation in its history, and his calling has ever been recognized as one of the most honorable and dignified that has challenged the attention and admiration of men, so much so that the Son of Man considered it not unworthy to be called "The Great Physician"; but while the individual doctor has ever labored for the advancement and amelioration of his kind, it is only in organization that he can hope effectually to translate his works into the organic law of the land. Every law upon the statute books of your state relative to sanitation and to stamping out contagious and infectious disease has been placed there by the Missouri Medical Association, after hard, painstaking labor upon the part of some of its members. One of the strange things of humanity is, that the representatives of the people in their legislature assembled have to be persuaded, cajoled and sometimes almost threatened before they will vote for a bill regulating the sanitation of the state, and the suppression of virulent contagious diseases which, left uncontrolled, might decimate the population of our commonwealth, or before they would pass a bill to prohibit an imbecile from practicing medicine within the borders of the state, and feast and thrive off of the misfortunes of its citizens. President Cleveland said in an address at the semi-centennial celebration of the New York Academy of Medicine, in January, 1897: "You have established a code of ethics which condemns charlatanism in all of its forms, and yet ignorant pretenders swarm over the land offering to perform miracles, or are located in our towns and cities preying on the weakness of the sick and afflicted, while men and women are allowed to die without medical attendance, deluded with the hope that faith will save them in their last extremity; within the limits of your professional power and influence you seek to restrain any approach to criminal malpractice, yet newspapers disgustingly though covertly advertise the way to such crimes and startle their readers with sensational tales of death and misery to which they are directly accessory. I need not suggest that such evils are allowed to exist by reason of the insufficiency of our laws or the laxity in their



execution. I have intimated that for this condition you are not responsible in a professional sense, but are you sure that as citizens you are doing all in your power to remedy the situation?"

And yet our legislatures refuse to interfere when we ask for the remedy to eradicate these evils!

The first great object of this Association is to banish contagious disease from the borders of the state. The triumphs of medicines in this line are among the marvels of the world; to recount them, coupled with the history and achievements of the men whose conceptions made possible the suppression of smallpox, yellow fever, diphtheria, cholera and malaria, would be an evening's task of unalloyed pleasure. Wendall Phillips said he knew of "no greater blessing from out eternity which could touch the shores of time, than freedom for man, woman and child." The great orator spoke only of civil liberty; may we not hope that the day is not far distant when the science of preventive medicine shall have so far advanced that we may be able to answer back to Wendell Phillips, that not only civil but physical liberty has been granted to the children of men. "Inasmuch as ye did it unto the least of these, ye did it even unto me," was the proclamation of the Nazarene, and has become the Shiboleth of medical men everywhere. Should a pestilence exist here, suppress it: should your child contract diphtheria, quarantine it and protect your neighbor's child; should smallpox break out in your town, vaccinate the unvaccinated and shut off communication with your neighboring towns; should the water supply of a town or community become polluted and infect its citizens with cholera or typhoid fever, correct it and stop the source of infection. Wherever and whenever contagious or infectious disease shows itself, quarantine, clean, purify, disinfect, vaccinate, is the cry of our profession to the state, accompanied by the demand that these procedures be incorporated into the laws of our commonwealth and enforced as rigidly as the laws against murder or the laws against pilfering your neighbor's property. We war against quackery in all of its forms, not only out of, but in the profession. We not only seek to suppress the blatant, loud-mouthed, ignorant imbecile, whose newspaper advertisement, which greets you every morning in your daily paper at your breakfast table, is an insult to the intelligence and enlightenment of our citizenship, and whose effrontery is so brazen as to indicate intimate relationship with the inferno, but we warn our own members that he who advertises his own wares as superior to those of his professional brother, that he who by the shrug of his shoulder, the elevation of his brow, by the wink of his eye, or any other act would derogate the standing of his brother and elevate himself, that he who by innuendo or insinuation would endeavor to pull his professional brother down that he himself might climb over his prostrate reputation, savors of the quack and is unworthy the company and association

of reputable men. In order to effectually accomplish these ends our organization is compact, with the county society as the unit, as the county is in the organization of our state government, and the voice of the smallest county society may be as potent in the direction of affairs as the voice of the representative of the most powerful society in the state. There is no ground for jealousy or bickering, as every county in the state which will comply with the laws of the Association may find representation in the legislative hall of the body and be heard upon every question which may come before it. At first, I did not think the workings of the Association would be practical, but the more I study them, the more am I persuaded that their provisions are wise, and that the organization is as nearly perfect as any scheme of organization could be. Under it we can become a power in the state; under it can we hope to secure the recognition we ask and which our numbers and position entitle us. Working along its lines and under its provisions we may hope, not only to banish contagion from our borders and to cleanse and purify the state from the foul stench of quackery which confronts us on every hand and cries to the very heaven, but to develop the Association to the highest degree of usefulness and to present an individual doctor in every way worthy of his calling. The organization is complete, it is sufficient, it is thoroughly furnished to accomplish the ends for which it was organized, and it should be sufficient to imbue its members with an ambition to make the Missouri State Medical Association one of the great and powerful institutions of the commonwealth; it should stimulate their pride, it should awaken in them a zeal to attend its meetings, it should engender among them a generous rivalry to become members of the House of Delegates and participate in the law-making functions. It should stimulate us all to high ideals and more resolute deeds for the welfare of the Association and the up-building of our beloved state. Had I my professional life to live over, I would never miss a meeting of this Association, I would write a paper for its every meeting, read it when I could, and when I could not, listen to some one who had written a better one than I could hope to write.

A word to my professional brother from the country. We have been entirely too negligent in the preparation of papers for the meetings of our Association and have turned over the scientific program too exclusively to our city brother; while it is true that in very many ways the city doctor has innumerable advantages over the country doctor, in chances of necropsies, in opportunities for original investigation, in intercourse with his intimate professional friend who may possess expert knowledge on a particular subject; in his access to great libraries; in easy approach to hospitals, where he may visit its clinics, watch its operations and take daily notes of the progress of new experiments and new procedures; yet there are still some advantages

which accrue to the man in the country, who comes more intimately in contact with his patients, learns more of their private life, sees more of the side issues of disease, and frequently has experiences alien to the denizens of the city; he has to be more self reliant than the man in the city because he cannot always find help just across the way, and has to solve many problems alone, which his more or less fortunate city brother calls in a consultant to help solve for him, so that without being immodest at all, we might occupy more space on the scientific program and still the Association not suffer in the tone and pitch of the papers read before it, and the whole profession be benefitted by the active participation of all classes of its members in its scientific proceedings. If we are the conservators of public health, and we are, then we should have the power to make our recommendations effective, not only in the local affairs of the state, but of the nation, and the medical fraternity should not only be represented by state Boards of Health, but by a national Board with an additional representation in the cabinet of the President, whose recommendations should form a part of the President's message as much so as those of the Secretary of the Navy or the Secretary of the Treasury. We should be a component part of the government itself, and our voice be as potent in the control of its affairs as any other arm of it. Responsibility should carry with it opportunity, and opportunity without power to act is of no effect. This Association should not only be represented in the legislative branch of our state government, but in the executive as well, and the State Board of Health should be composed of men recommended by this Association, who should be salaried and have power to carry into effect the legislation dictated by this Association.

We have erected high standards for the student body of young men who are knocking at the door of the profession and are asking admittance to its ranks. Is it not time that we paid some attention to the teachers, and make some requirements of the men who are to teach this body of cultured, intelligent young men who are filling our medical colleges? You say that is the business of the college: I reply that the college is simply a reflex of the profession and not the profession of the college, and I insist that while *nascitur non fit* may not entirely apply to the medical teacher, still it finds its application, and the legislation which requires a high standard for the student necessarily implies a high standard for the teacher. The one should beget the other, they follow as the night the day. The power to raise the standard in one instance should be co-existent with the power to raise it in the other. The days of the private medical school should be numbered, and it should be a thing of the past.

We are the living representatives of a profession as old almost as history, and its splendid achievements have been builded by the earnest labor of many of the greatest of earth. "Ages are spent in collecting



material, ages more in separating and combining it; even when a system has been found, there is something to add to, alter or to reject. Every generation enjoys the use of a vast hoard bequeathed to it by antiquity and transmits that hoard augmented by fresh acquisitions to future ages." And in view of all this how absurd are some of the Isms which spring up in a night and lay claim to be recognized as separate and distinct sciences. If there is any truth in them, it is yours and mine to use for the benefit of our patients, as much as anybody's. How vain and foolish that a simple practice which the medical profession for a hundred years has recognized as one of the adjuvants of treating some forms of disease should be dignified into a profession and physicians in every locality in our state be called upon by their communities to come into open rivalry with its ignorant devotees. How laughable the idea that a peculiar state of mind into which an imaginary sufferer may work himself should be called a science and magnificent temples erected for the propagation of this monstrous negation of all known facts! They would turn back the progress of the ages and plunge us once again into midnight darkness when civilization was slumbering in the dim cathedral lights of medieval times, when ignorance and superstition held sway over the benighted hopes of man and the star of progress seemed to have set to rise no more forever. (The laity must be educated to a sufficient appreciation of the merits of the profession of medicine that they shall demand a state where the longer continuance of these isms shall be impossible). "What is new in them is not true, and what is true in them is not new." The trifles which the regular profession has known and practiced for centuries the commercialism of the Twentieth century would dignify into a science.

The standard of admission to the practice of medicine should be the same in every state and a license issued by one Board of Health should entitle its holder to practice anywhere in the Union, and until there is legislative action to this effect the different boards of health might by agreement hold their examinations simultaneously with the same set of questions to each applicant and thus have a universal standard. From the statement of the Bulletin of our State Board of Health issued in June, 1905, there is not a single state in this Union which fully reciprocates with the State of Missouri in the recognition of the certificate of the State Board of Health, and the Board further makes the humiliating statement that the legal requirements in Missouri are below the "Standard of requirements of the American Confederation of reciprocating boards." This association should make it its business to see that the requirements in this state are fully up to the standard, and I would suggest that the legislative committee be instructed to work for the passage of an amendment to our present laws, which will fully bring us up to the standard, and abreast of the

most progressing states of the nation. The chief stumbling-block seems to be that our law does not require from the applicant a diploma from a college of recognized standing with a curriculum of four full years. It seems to me that we have progressed far enough to make this requirement and that it should be done as speedily as possible in order that a Missouri doctor may everywhere be recognized as the equal of anybody's doctor, and a certificate issued in this state may be a first-class introduction of its possessor anywhere in this nation. To attempt to enlarge upon the natural advantages of Missouri would be as futile as to attempt "To smooth the ice, to paint the lily, or with dim, taper light to seek the beauteous eye of heaven to garnish." Certainly our doctor product should not fall behind but everywhere should be worthy of imperial Missouri.

No medical college should admit any man to its course of study, who is not a graduate of a High School which articulates fully with the State University, or who can not pass a satisfactory examination upon the curriculum of such High School to be conducted by someone in no manner connected with the medical college, and the State Board of Health should admit no one to its examinations who cannot produce a diploma from a standard medical college, requiring four full years' attendance upon its lectures and its clinics.

While I am not an advocate of paternalism I believe that the state should furnish vaccine virus and antitoxin free to its citizens and bear the expenses of vaccinating the population and administering antitoxin to the exposed during an epidemic of diphtheria. The state spends thousands—yea, millions annually for the culture of the minds of its wards. Why not thousands for the protection of their bodies? If the theory of our institutions that the child is the ward of the state, be correct, how can this state escape the obligation of looking after its physical welfare, not only after it becomes incapacitated, but to keep it from becoming a burden on the body politic? It occurs to me that the sane way is to keep the child healthy so that it does not become a ward in the most acute sense of the term. Should the objection be offered that taxation would fall entirely on the rich, the answer is complete—he would be amply repaid in the protection and immunity afforded him just as he is protected from their vices and their ignorance by the education for which he pays; you cannot protect and elevate a part of the community without the whole of it feeling its effect and the ideals for the state should be the ideals of the very loftiest citizenship. We should have a commission *de lunatico in quirendo*, to whom should be referred all pleas of insanity in criminal cases, whose duty it should be to inquire into the sanity of all cases submitted to them, their decision be final, and the profession no longer be subjected to the humiliating spectacle of the professional expert, who is willing to take either side of a given case for a fee, and plead that case just as a hired attor-

ney. The superintendents of our state hospitals would be admirable men for the positions; their deliverances ought to be eminently fair and just and would go a long way toward ridding our profession of an opprobrium which is hurled at us every day. We should have a State chemist whose business among other things, it should be to determine the truth in cases of suspected poisoning, and no longer have Dr. A. swearing there was poison and Dr. B. swearing there was none, and thus prostituting our noble profession to ignoble ends. The medical expert too often brings the profession into opprobrium, and as our system of jurisprudence provides a judge to interpret the law in these cases, it should provide a qualified doctor to interpret and state medical truths and forever abolish the temptation to the cupidity of a commercial individual who puts a higher price upon money than he does on his own soul, or the life and liberty of his fellow citizens.

That man who waits for the representative of some proprietary medicine to come in and tell him what to give his patients possibly may escape being classified as a charlatan, but he certainly has very little respect for his own professional attainments and voluntarily surrenders his learning, his privileges and his duties to some one else who knows absolutely nothing of his case. With the subtlety of an Iago, the proprietary medicine man steals the wealth, position and reputation of an unsuspecting profession and supplants professionalism with a damning commercialism, all because physicians allow it and are controlled by a habit which they "disdain to control"; he comes with a pleasing smile and presents you with a bottle of Gastritico, Hepatica or Duodenatica with his positive opinion that it will cure your patient and you are assured it will because it bears the name of the organ affected; and of course it works, it just can't help it, and there you are, your individuality gone, your attainments sacrificed, your professional acumen handed over to organized greed. "Eternal vigilance" is not only "the price of liberty" in affairs of state, but in the medical profession as well. It is high time that we should shake off the lethargy which this practice begets, and assert our privilege to practice our noble profession in our own way and give to our patients the benefit of our own knowledge and not turn them over to is my honest belief that proprietary medicine is doing more to unthe greedy maw of a soulless corporation which makes stuff to sell. It dermine professionalism today than all other influences combined; it lulls the doctor to sleep with the insidious proposition that it will do his thinking for him, and eases his conscience with the unction that he has done the best possible thing for his patient because he has medicated them with a nostrum which is backed up by a corporation with lots of money behind it, and it would not of course spend its money on the remedy unless it was a good thing—for the corporation. Either this nefarious business must be stopped or professionalism is dead and the



erection of high standards of culture of medical men worse than a useless waste of time and money; the remedy lies at our own door and only requires a negative action on our part to effect a perfect cure. Stop prescribing them: your patients will stop taking them and their manufacture will suddenly cease. Their proprietors rely upon us as their active agents for the sale of their products and if we cease our participation in the spread of the business the only possible middle man between the manufacturer and the people has been removed and there is no longer possibility of contact.

The foregoing impress me as some of the immediate needs of the profession and of the state and the sooner that these shall become established law and custom the sooner will this Association be on the high road to the accomplishment of some of the aims for which it was instituted, and the sooner will the individual physician begin to realize his high calling, his duties to his state, to his neighbor and to himself, and to sing the song of that inspired physician who wrote:

“There are hermit souls that live withdrawn

In the place of their self-content;

There are souls, like stars, that dwell apart

In a fellowless firmament:

There are pioneer souls that blaze their path

Where highways never ran,

But let me live by the side of the road,

And be a friend to man.”

## ADDRESS IN MEDICINE.\*

BY W. G. MOORE, M. D., ST. LOUIS.

I count each one who was present this morning fortunate, if he take any interest in medicine, because we heard from this rostrum one of the most deservedly notable governors in the United States. A governor may be notorious, but ours is notable. A man may be notorious for his infamy. This man is notable among other good deeds for his pledge, that whatever this association may incorporate and present for his consideration will receive his hearty co-operation. I want you to let this thought sink down into some convulsion not occupied by trivial things and stay there, for this is the echo of what occurred five years ago when we said, organization is the keynote of power. There were then in our midst those who were inclined to be Miss Nancies and who said, "What can you do?" and they added, "Oh, let up on the patent medicines." I reply in the well known words, "Lay on Macduff, and damned be he who first will cry enough."

I have chosen an unusual theme for an address before a medical association. It savors of politics, but what is politics but the science of government? And, gentlemen, you cannot conceive of a higher ideal for consideration than politics on such a basis. The man who neglects his political duties, neglects the highest privilege ever given to man. We stay at home and leave the very duties that every day are wanting for supporters. I congratulate you above all things that you have for governor of Missouri a man who stands for the best impulses in everything and I say to you, hold up his hands. I do not believe any man is great because of any political party, but that man who represents the highest and best in the state should receive our support whatever his political affiliations may be.

So far back as the history of men is recorded we read of them being banded together for the accomplishment of their ends, be they good or evil, lawful or unlawful. It is manifest to any observer that many evil practices are lawful, that is they are permitted to exist by "the powers that be."

Who are and by what authority do these powers obtain and maintain their positions as law givers? The constitution of our country intended that it should be in the hands of those composing the government, where it should be, and thereby remove it from the control of a few pretenders who came down to us through the divine right of kings. The throwing off of England's yoke and that immortal declaration of

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\*Oration read at the annual meeting, Sefferson Cify, May, 1906.

Thomas Jefferson declaring equal rights to everyone becoming citizens of the United States formed the basis of a freedom which has been not only the proud boast of every free born American, but it has attracted to our shores the liberty-loving of every land under the sun. Mr. Jefferson likewise incorporated in that deathless document that under our government special privileges should not be possessed by any one. This is the keystone in the arch of our government which we fondly hope will endure forever, to shed its benedictions upon the just and its maledictions upon the unjust always. Justice Brewer of the United States Supreme Court has recently said with much pith and moment: "Very many good men believe they really have nothing to do with the making or the execution of the law; which is exactly the same as if a layman should assume that religion was a matter which concerned no one but the preachers." This sentiment is worthy the high station whence it came, and it is explanatory of the evil days into which we have fallen.

Can you realize that the Declaration of Independence is only 130 years old! Especially is it well nigh impossible to conceive when you recall its history of accomplishment for that time. Through the Revolutionary War and all others up to 1861, Americans co-operated as brothers against all common enemies and vanquished them in their turn.

In 1861 the dark days came upon the sunshine of our peace and the war drum was heard summoning brother against brother in the deadliest and most valiant war of all time. Scarcely had the smoke of battle lifted from those dreadful fields and the black-draped widows and fatherless orphans were to be seen everywhere sitting amid the ashes of their desolation, when there appeared upon the scene a set of men who, more like beasts of prey than human beings—veritable ghouls—followed in the wake of the armies and set their traps for the unwary.

These creatures were ever ready, North and South, to ply their infamy, and were known as government contractors, schemers and promoters. They waxed fat and insolent upon their stolen booty and then began to demonstrate the prophecy of Sir Thomas B. McCauley, who said, "the greatest danger to American institutions lies in the fact that the influx of the scum of foreign countries would seek asylum there and become the tools of unscrupulous men of wealth who would manipulate their votes for selfish ends." Was ever the picture of prophecy more thoroughly emblazoned than this has been!

Contrast the days of Clay, Calhoun and Webster, those patriots who stood guard over our country's welfare for our common weal, with these sharp-eyed money changers who scheme and plot for themselves and their coterie of promoters of selfish ends and you will see a picture

so pitiful that we must fain turn from it with disgust and ask ourselves, what of the future?

If the thirty years following the Civil War furnished us the most shameful political spectacle in our history and filled "the seats of the mighty" with money bags, after the conception of the cartoonist, what could we expect different from that which we have? We have lifted up mammon and dethroned God—the embodiment of justice and right. And we stand today gazing upon a spectacle unrivaled in the world's history, while our selected rulers of yesterday in politics and finance are seen scampering in every direction seeking asylums of safety and causing us mentally to exclaim—"Oh, ye generation of vipers, who hath warned you to flee from the wrath to come."

Who did warn them? Who was this man crying in the wilderness of our political despair and bearing aloft the torchlight of hope into the dark night of the despoiled poor? He is such a believer in the fatherhood of God and has lived so in conformity thereto, that even his enemies proclaim him a Christian. He is such a believer in the brotherhood of man and is so much akin to all their interests that he has been variously styled democrat, plutocrat, socialist, anarchist and ignoramus. But no man has dared to say that he was dishonest or disloyal or feared to maintain anywhere the ideas in which he believed. It was this man who said, "if you install the trusts in this country you will see a carnival of crime unequalled in the annals of time." Gentlemen, the trusts have been installed and the carnival is here, and no such fantastic figures were ever seen before as those now going forward in the National Cotillion of American politics and finance.

The teaching of this man before, during and since two of the most brilliant political campaigns of our country, awakened the conscience of our people and set in motion a moral wave that is sweeping from ocean to ocean and portends with brightest hope that "a government of the people, by the people and for the people will once more be restored to them and will not perish from the earth." This born leader of men has handed the torch to another leader who is now marching at the head of the column in the army of justice and right amid the plaudits of all his countrymen and bearing on his banner of reform the epitomized dictum of Jefferson—"a square deal for everybody." After these references I need not say to you that the men referred to are William J. Bryan and Theodore Roosevelt, our president.

But you say, "What has this reference to do with us as doctors?" That is just the point I wish to emphasize. The majority of the men who came to the front of the political platform in 1865 and up to within the past few years were of a coarse fibre and knew nothing of real statesmanship, or aught else above the sordid and low-flung business of making money, whatever the means necessary to that end might be.



Such men made laws and regarded them for no other purpose. Hence it is that every form of trickery and chicanery have had representatives in legislatures, congresses and senates elected to represent the greatest number of our people in the best way possible.

Think of the spectacle of having certain senators pointed out by some of our most representative magazines as belonging by right of purchase to certain railroads, beef trusts, sugar or tobacco trusts, or the most execrable of all trusts, the patent medicine, which has been aptly called the "Great American Fraud," by no less a journal than *Collier's Weekly*, whose efforts coupled with those of the *Ladies' Home Journal* and others have made such exposure of the false pretense and mendacity of these patent nostrum fakirs that it is beyond conception that men of reason, with the ability to read, could further indulge their habit of paying two prices for mean whiskey rather than half as much for a good article. Recall if you please the omnipotent "Liquozone" ("*Liquid Ozone*") which made the duration of life and happiness solely dependent upon the amount one took at a dollar per bottle, revealing its wonderful powers to the Massachusetts chemists in the proportion of 90 per cent. of water and ten per cent. of sulphurous and sulphuric acids, which bear about the same relation to the therapeutics of today that the quack doctor sustains to an international congress of scientific physicians.

There is an element of tragedy connected with the downfall of those twin purveyors of mean whiskey and misery, peruna and Paine's celery compound, and dozens of others of their kind, when we remember that only a few short weeks ago the readers of our great Sunday papers saw rows of photographs which looked more like defeated plug-uglies than the distinguished senators, congressmen and legislators whose names they bore and all of whom were declared to have been cured of catarrh by "peruna," and nearly all of whom were still under treatment by the same remedy for progressive dementia and constitutional mendacity.

No stream rises higher than its source and with these gentry as a source for our laws is it any wonder that an outraged people are rising up all over the land and demanding that such rascals be turned out and able, honest and humane men be put in power who have enough of statesmanship to lift them above the dross of dirty politics and be content with a salary to make them independent and the consciousness of duty well done.

No one more admires the achievements of the press, or would grant it more freedom than I. It is the greatest agent for good and evil that exists among men. That it should further the cause of malefactors and spread broadcast falsehood under the guise of truth is to its everlasting shame. There can be but these causes for the existence of such a condition of affairs, viz., money, political or commercial ad-

vantage or personal revenge, all of them unworthy objects when unworthily attained.

I want to ask your serious consideration of the facts that daily stare you in the face when reading our metropolitan papers. First, a directory of abortionists, quack doctors, divorce lawyers, and, above all, pointing out the wonderful curative powers of some worthless nostrum which the editor could not be induced to take or allow his family to consume under any circumstances. Yet he ascribes virtues which he knows they have not and conceals vices which he knows they have. Can you imagine a greater prostitution of the noble opportunities belonging to a body of men second to none other in intellect or advantageous position for the uplifting of men?

Looked at from every view point of which I am capable I am unable to understand but one reason for keeping secret the contents of any medicinal preparation and that is the pecuniary gain of the owner as against the interests of the community who may use it. A nostrum may often be injurious by reason of its component parts as well as by the fact of its negative quality causing patients to continue its use until the time has gone by when proper medical aid might have restored one to health.

If it were not for the press there would be no patent nostrums. Appeal to the press for a higher moral tone and a cessation of their endorsement of these frauds has thus far availed nothing except in a few noble examples, such as *Collier's Weekly*, *The Ladies' Home Journal*, *The Baltimore Sun* and the *Chicago Tribune*, at an annual loss of \$75,000 to the latter paper, and a few others who have refused to longer lend themselves to this nefarious business. *The Intermountain*, a paper published in Butte, Montana, also declared against it for a time, we are told, but were forced to return to their former evil ways because they could not afford the pecuniary loss. The other journals named did what they did at an enormous money loss in order that right and not wrong should be done.

If the great body of the press is deaf to all entreaty to cease their shameful advertisement of these frauds where is our remedy? There is no more powerful political body in the land than a thoroughly organized medical profession which shall lay aside all party affiliations and concentrate their full strength upon such legislation as will make it unlawful for the press to dupe and deceive the ignorant masses not only into the useless loss of their money but the far worse misfortune of losing their opportunity to recover impaired health and sink helplessly into the despair of narcomania.

Not only the secular but the medical press for the same venal reasons has been engaged in the exploitation of these nostrums, and if there be one offender greater than all the rest it is the religious press

for it bears upon it the stamp of *christian* approval and therefore to the minds of thousands it *must* be true.

The latter as well as the former must be controlled by legislative enactments, but the medical press is directly in the power of the medical profession and if the support of the doctors be withdrawn from those medical journals persisting in this objectionable course of advertising they will disappear like frost before the sun.

A representative druggist of St. Louis informs me that the sale of patent medicines has declined more than one-half in the past year as the result of the exposure of their real nature and purpose and that he and his brethren will welcome the day when they will disappear entirely or be relegated to department stores and junk shops, where they belong.

The *National Druggist*, a paper published in St. Louis, recently put forth an article claiming that medical organization meant the formation of a "doctors' trust", and trying to set the retail druggists at enmity with their natural allies the physicians, by declaring that we, (the doctors), "were trying to cause a loss of 60 per cent. to them by preventing the sale of patent nostrums." The above quoted statement shows how the druggists view this nonsensical stuff. If there be a "doctors' trust" it is the only one known under heaven or among men whose members use their full power to diminish their own revenue and increase the benefits to the public. The wail of the *National Druggist* is another case proving the old saw that "it is the stricken dog which howls."

It might be well to cite a few deeds done by this "doctors' trust." It has increased longevity and the comfort of living all over the civilized world. It has caused epidemics to be robbed of their terrors by limiting them to endemics and stamping them out of existence. It has freed the southern half of our country from the scourge of yellow fever as an epidemic and turned the beautiful isle of Cuba from an incubator of disease into a salubrious place of habitation through the efforts of a medical commission whose achievement is not excelled by any other accomplishment of our government. It has exterminated or is exterminating the mosquito, the cause of the yellow fever scourge, just as it will exterminate this other insect, the patent nostrum vender, the cause of many scourges. It has made it possible by sanitary science to build railways into the richest and most productive sections of the earth and make them habitable thereafter. No more important factor is concerned in the construction of the Panama Canal than that of sanitation. It is building and has built all over our country sanatoria for the care of the unfortunate victims of the white plague and is curing thousands who otherwise would be cut off in the morning of useful lives. It has robbed diphtheria, the direst scourge of childhood, of its terrors through antitoxin, and smallpox epidemics are



only memories as are those of Asiatic cholera. The millions of lives saved by surgery rivals those above narrated. The intelligent and strict application of scientific rules in the last great war has produced results that not only made the world marvel, but enabled a diminutive race of Asiatics to overwhelm the cruelest and most boastful nation on the face of the globe.

The "doctors' trust" is taking the demon of avarice by the throat and causing him to tear down the gloomy and pest-breeding tenement houses in every city of the world where infant mortality reached 60 per cent. in the first year of life in New York City, and let in those angels of health and inspiration, sunlight and fresh air, reducing the mortality to 16 per cent. It has taken the death germs out of the milk supply of cities to further increase the happiness and health of the multitude.

If medical science had done nothing else but given to the world anodynes and anesthetics the world would always be its grateful debtor. It is needless to enumerate further the priceless blessings bestowed on men by those of Galen's guild—its beneficence shines like the sunlight of heaven upon men and women, the beasts of the field under the affliction of disease to desert his "cure-all" and limp back and nostrum venders. I have known more than one of these wretches into the circle of real physicians and ask for aid which he always got as if he had been a saint instead of a sinner.

With all these glorious deeds behind us there is yet much in front of us to be done. Socrates said, "I would be ashamed to own a beautiful picture and hang it on the walls of my own house, to be enjoyed only by myself and my friends." The loftiness of this sentiment is worthy of its matchless source and out of it grew the mural decorations of the ancient cities whereby the humblest passerby could gaze upon the handiwork of the world's greatest craftsmen and have their minds enlightened and their souls lifted up above the miseries and misfortunes of their unhappy fates.

It is the duty of every man worthy the name to do all he can for the elevation of his race and the amelioration of their afflictions. The time has come when men must turn from the worship of mammon to the worship of him who said, "blessed are they who hunger and thirst for righteousness' sake."

Among the world's benefactors none have shown brighter than the members of our profession. Jenner gave us vaccination, Virchow cell pathology, Pasteur the mysteries of germs in their relation to disease, Sir James Y. Simpson instilled that God-given vapor into the nostrils of suffering women and made them oblivious to the pangs of parturition and the keen pain of the surgeon's knife.

It remained for our illustrious young countryman, the lost and lamented Reed, to find the prevention of yellow fever and thereby bless



the generations born and to be born. No more heroic figure adorns our country's history than that of Ephraim McDowell, who opened the door of the arena of abdominal surgery in which have been performed so many brilliant and life-saving feats. It would be useless reiteration to further recount the heroes of our guild. Our case is proven beyond cavil.

It now remains for us to keep the escutcheon clean. How shall we do it? First, by each one of us changing himself from an indifferent pessimist into a sanguine, vigilant optimist, a politician who knows and does that which is best for the greatest number. See to it that no unworthy schemer shall be elected to any position of law making or law dispensing if in our united power to prevent it. Hold up the hands of every public official who dares do the right because it *is* right, to whatever party he may belong. And, gentlemen of Missouri, you could not have two more shining examples of the kind of men I mean than the Governor and the Attorney General of our own state.

Elect more doctors like those already representing us so honorably in our legislative bodies and wherever you see the head of a gangster representing the greed of money in any form rising above the political horizon, hit it with all the might of righteous indignation and know that you have struck a blow for your country's weal. Do all you can for the children of the state by emancipating them from the factory wheels which grind out their youth and with it their virtue and hope of the future. Compel the beasts of prey who, under that disgusting caption of "business is business," exact their last farthing as rent for the death dealing tenements in which they live, to tear them down and erect in their places such abodes as will give these helpless wards of christian civilization those two necessities of life which are still outside a trust—pure air and sunlight at least one day in a week.

"Man's inhumanity to man  
Makes countless thousands mourn."

But some man will say, as did Cain after hiding the body of his slain brother in the field—"Am I my brother's keeper?" This cry has come down to us through all the ages from the time of the first fratricide whenever men wished to make excuse for their own selfishness and give reason for their neglect of others.

A recent expression of Gov. Folk finds a warm welcome in my heart. He says he "finds nearly all of the convicts in our state's prison to be poor." Their work is worth 60 cents per day to the state and has made the prison more than self supporting. He therefore recommends "that a part of their earnings be paid to the helpless ones dependent upon them" while the convicts are in prison and that when they leave its doors they will not be brought face to face with the alternative of starvation or the commission of another crime. Others

may dissent from this view but all true physicians will be in accord with it. "Blessed is he that considereth the poor."

There are physicians in every community who live out their lives without doing one single thing for the benefit of their profession. They never attend a medical meeting, local, state or national, never write a paper giving others the benefit of their experience, never contribute a dollar for the undertakings of their brethren, but simply sit idly by, merely doctors for revenue only. It is such men to whom Justice Brewer referred so scathingly as already quoted. They never vote to augment and increase the power of their profession for good; they remind us of the great horned owls whose mission it is to look wise and hoot at the efforts of their superiors. Let us endeavor to show them the error of their way and bring them into the great active, progressive body of medical men bent upon the improvement of themselves and their fellow men. Let each of us constitute himself a committee to further with all his might the passage of the medical bills which are to come before our legislature, the labeling of the containers of all medicines offered for public consumption with their exact contents, the conviction of all advertisers of obscene literature and the punishment of those nameless quacks male and female who, masquerading in the garb of physicians, drag our art in the mire of degradation.

The Public Health Medical Society is doing this and has already done it in St. Louis. The United States Government has denied the use of the mails to scores of medical fakirs and quacks and the Attorney General has enjoined the Proprietary Association of America, known as the Drug Trust of the United States, from coercing the wholesale and retail druggists to fix the rate of their outputs in violation of the Sherman anti-trust law.

Think of it! All this within a few short months as the result of getting the attention and convincing those in power of the enormity of these national crimes. All honor to the great leaders of the press who have taken up our just cause and made it possible of attainment. The government has not or cannot enact more beneficial laws than those contemplated to protect its subjects from the greed of these men, who would injure the multitude in order that a few base creatures might profit by its undoing.

I have no apology to make for leaving the beaten path which recounts the scientific achievements of the profession. These you get daily in the medical press. I trust I have not touched an unresponsive chord in thus dwelling upon the unsurpassed importance of medical politics as the means of betterment to ourselves, the state and nation.

Do these things which speak for humanity and the progress of truth and when you have fought your last battle in this righteous war and the twilight of your life shall steal into the gloom of oblivion you will have planted the flag of triumph over the places where you sleep.

## TRIUMPHS OF AMERICAN SURGERY.\*

BY C. H. WALLACE, M. D., ST. JOSEPH, MO.

When Lord Thurlow, a century ago, proclaimed to the House of Lords, that there was no more science in surgery than in butchery and pitted the influence of his brain and position against granting a charter to a few light-seeking surgeons, he uttered a truth that well obtained at that day.

At that time surgery had no place among the sciences; had made no impression upon the world's literary life; its practice was crude and harmful and in the hands of the uneducated and irresponsible; the barbers were the operators in the field.

On the other hand medicine had a well established and honorable position; public favor lent her support, and governmental influence and assistance were ever ready to aid her advancement.

Not so with surgery; darkness enshrouded her field of operation and popular opinion discredited her possibilities. With the exception of here and there a master mind groping in the darkness, like a Harvey discovering the circulation of the blood in the human body, or a Hunter divining the ligation of arteries for the control of hemorrhage, no real progress was made toward surgical advance until the last century.

It has remained for the last century, the century of American life, to see more progress than was made in all the preceding twenty-five hundred years. Prior to the last century, pain, uncontrollable hemorrhage and blood poisoning, stood forth as deterring and unsurmountable obstacles to her advance.

Twenty-two hundred years of human life, twenty-two hundred years of human progress, contributed but two of the corner stones to the splendid temple of Surgical Science, as it now stands; the other two corner stones and the entire superstructure have been supplied by the last century.

Hippocrates and Galen are great names, but their value is historic and not scientific: Harvey and Hunter stand alone for scientific worth for eighteen hundred years in surgical achievement.

It was those earnest words of Hunter, "Do not think, investigate," that announced a new era in surgical advance, the dawn of scientific examination of all the vital organs and the phenomena of life, and with the growth of knowledge, an appreciation, that a single organ might afford sufficient knowledge for a life time of work.

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\*Oration in Surgery, read at the annual meeting, Jefferson City, May, 1906.



Not until the last century did we see surgery take a definite and respected place among the sciences and establish a claim to dignified and honorable recognition. In this century alone we have seen the foremost statesmen, the leading scientists and the most profound scholars do honor to their achievements.

In this century alone surgical bodies have been born, have grown and flourished and become potent factors in the progress of civilization. In this century alone we have seen hospitals spring up in the cities of every nation to offer relief and aid to suffering humanity. In this century alone the beneficent influence of this great science has touched the purse strings of private wealth to the end that there have been erected great laboratories where experimentation and observation both upon healthy and pathic tissue, can be carried to the very zenith of perfection.

In our effort to chronicle the achievements of American surgeons who have been epoch makers in the advance of surgical progress, whose conceptions and discoveries have lighted the way to the unfolding of this life saving science, we begin with one who divined the application of the surgical art to a new and unexplored field; who cast the first ray of light across the great domain of abdominal surgery; one whose dauntless and daring act marks the most important surgical event of any time or any people; whose influence is incalculable and beyond measurement, being estimated in America alone to add a million years to every three years of female life: I refer to the great McDowell with his first ovariectomy in the little town of Danville, Kentucky, ninety-six years ago.

Had this great genius faltered in carrying out his convictions when a raging mob threatened to lynch him when he sought to take a step forward and do the first abdominal section; had he wavered under the denouncement of the profession, the press and the laity, to do a second and a third, and convince the profession of the wonders of his head and hand, for aught we know, darkness might still cast its shadows across the great field of abdominal surgery.

Medical history shows that in Europe egotism, jealousy, and prejudice were so deeply rooted that a quarter of a century rolled by before this operation was undertaken in her borders. But thanks to our own Nathan Smith, the Atlees, Dunlap, Kimbal, Sims and Thomas who took up the work McDowell had mapped out, in the face of opposition and invectives, they demonstrated this discovery to be the keystone to surgical development.

Not another red letter day occurred in the progress of surgery from McDowell's memorable operation in 1809 until 1844 and this demonstration was also upon American soil.

In the little town of Hartford, Conn., a teacher of chemistry was demonstrating the action of nitrous oxide gas. In the illustration the

fumes of this gas were inhaled by one of the audience and unconsciousness followed. Horace Wells, a dentist caught the light from this phenomenon and inhaled the fumes for the extraction of one of his own teeth and as he awoke to consciousness, cried out in his enthusiasm "A new era has dawned upon the world, I felt no pain."

Wm. Morton in the same year took a step farther by virtue of the light that had gone before, and inhaled the fumes of ether producing an eight minute insensibility and with it came the thought in his mind, "here is an anaesthetic for surgical use."

Two years later the old Massachusetts Hospital was made famous when Morton administered ether for Warren to remove a vascular tumor and then was made the discovery of ether narcosis, that blessed boon that has taken the bite from the surgeons knife and pushed surgery forward to a degree of perfection that has astonished mankind.

The next great milestone that marks an epoch in the progress of surgery was presaged by the illustrious Mott, whose clinical experience had taught him that cleanliness was an important element in surgical repair and practiced cleansing his hands and instruments before operation; but it remained for Lister to catch the light that burned in this great American brain and discover putrefaction to be the harmful agent in the repair of wounds.

Ere long Pastuer took another step forward and discovered, that this putrefaction was due to a fermentation produced by the bacteria in the air. Thus from this triune cerebation was evolved our present system of antiseptic surgery.

The facts then show three master minds of three great nations contributing to the discovery and promulgation of a great truth, with history giving the credit to Lister and the earthly immortalization of his name.

Growing out of and springing from the discovery of the fundamental principle of microorganic life came the microscope, that ever helpful hand-maid of surgical advance, and with this instrument of discernment the exposure of that vast realm of infinitesimal beings that swarm and multiply about us to be carriers of infection and disease to the nations of earth.

Growing out of this discovery came the destruction of that deluding theory of spontaneous generation, and springing from its ruins that great truth that life is born of the living and that microorganisms are the mighty armies on whose banners are inscribed the axiom, "we are the up-builders and the destroyers of the larger forms of life."

The miracles of modern surgery are due not so much to superior skill of our operators as to their knowledge of preventive means and measures against inflammation and suppuration.

So much for America's contribution to the discovery and promulgation of general surgical principles. Let us now consider if you

please, the triumphs of individual workers upon specific regions of the human body.

Sixty-four years ago, Sayre, of New York, one of the most progressive minds of his time, made the first incision into the pleural cavity for the cure of empyema. Eight years later Bodwitch and Wyman suggested and practiced paracentesis thoracis, but it remained for Stone to do the first thoracoplasty, an accepted surgical procedure of today.

Previous to this time expectation obtained in the treatment of purulent affections of the chest whose victims burnt, sweat, exhausted and died, or, by spontaneous rupture, eked out a miserable existence of chronic invalidism. The original work of these masters has not only reclaimed the victims of this disease from death or living misery, but has paved the way for our present perfected technique in thoracic surgery, a monument to the fame of American originality.

In surgery of the vascular system nothing was done until the beginning of the nineteenth century. Then American operators were the originators in the field. The ligation of the primitive carotid by Cogswell, of Hartford, in 1803, for primary hemorrhage records the first life-saving attempt for wounds of the great vessels. A repetition of this procedure by Twitchel for hemorrhage in 1807, by Post in its continuity in 1813, again in 1816, and the ligation of both primitive carotids by McGill in 1823, give evidence of American activity at this time.

Valentine Mott first essayed ligature of the innominate artery and rapidly followed this signal advance by ligature of one hundred and thirty-eight large vessels in the course of his life-saving work, thus leading the world in number and success.

From this starting vascular surgery has rapidly progressed until to-day every vessel that The Great Designer has provided with anastomatic circulation is amenable to the surgeon's knot.

In orthopedic surgery, American surgeons have been brilliant in work, ingenious in invention and liberal in contribution. The earnest and ingenious Sayre not only gave a remedy for the restoration to useful function of those defects of nature that had for all time been a mortifying blight to childhood, but invented the plaster of Paris jacket for the arrest of Pott's disease, that tubercular process which had previously inevitably lead to distortion, exhaustion and death.

A memorable picture for those who have seen this rugged type of American manhood before a thousand students, in one case earnestly demonstrating his inventive skill and genius upon distorted anatomy, and in another case exultingly displaying the success he had obtained.

This great genius was the first to successfully excise the hip-joint, was the first to teach incision and free drainage of suppurative joints; yea, did more to place orthopedic surgery upon a firm basis than all



others previous to his time. His work alone marks an important surgical epoch of the nineteenth century.

It was our own beloved Sims who revolutionized the great field of gynecological surgery by teaching the restoration of destroyed anatomical function, a lesion that had cursed woman since the birth of man. He was indeed an epic sower of ideas and had the full arm sweep of a genius. The seed he sowed fell not only in his native land but in London, Vienna, St. Petersburg, Berlin, in fact in every medical center of Europe. From this sowing has sprouted and grown the magnificent achievements attained in pelvic surgery—a monument indeed of American advance.

Cancer of the female breast; that blight to womanhood that in America alone yearly afflicts 20,000 homes, has had its previous mortality reduced from 100 per cent. to 50 per cent. by an operation that originated in the mind of an American surgeon. Halsted demonstrated by his gland dissection operation not that successful eradication meant complete removal of the entire chain of lymphatics in breast cancer, but that this principle obtained in all portions of the body where glandular tissue suffered infiltration from the original site of the disease.

#### INTESTINAL SURGERY.

Samuel D. Gross, that great philosopher of surgical practice, who so often in his teaching presaged advance a quarter of a century ahead of his time, first conceived intestinal anastomosis as a mechanical and physiological possibility fifty-nine years ago, and four years later, Kinloch, of South Carolina, first carried this conception into successful execution.

In the gradual evolution along this line, we have Sands doing the first operation for appendicitis in 1887, to be followed by McBurney demonstrating surgery to be the only successful remedy for that pestiferous and death dealing organ, the appendix, and placing this pathology upon a true foundation.

With this advance came Bull with laparotomy as the only effective treatment for stab and gun-shot wounds of the peritoneal cavity, and the wide spread influence of this operation was early felt upon abdominal surgery. With this advance came Murphy with that ingenious device, the Murphy button that has proven such a life-saving boon to humanity.

With this advance came Van Hook with laparotomy for that always previously fatal complication in typhoid fever—perforation, and as a sequence the operative treatment for that most fatal of maladies, suppurative peritonitis.

With this advance came the versatile Weir, who in the inspiration of the moment, divined the appendix as a rational route for the treat-

ment of morbid conditions of the colon, thus giving a surgical remedy for that tropical curse, amœbic dysentery.

What an array of surgical triumphs of American workers.

Hernia, that flaw in nature's mould which leaves the marks of its defects upon so many of human kind, finds cure alone in the surgical art. Here history gives the credit of the discovery of this operation to a foreign surgeon, yet the facts show that Marcy, in the city of Boston, practiced the restoration of the normal obliquity of the inguinal canal, excision of the sac with proper anatomical coaptation, long before the name of Bassini was known in this country.

For the perfected technique of this operation we bow in grateful acknowledgement to American skill and genius not only for relief from the wearing of annoying and pain-giving appliances, but elimination of the dangers of strangulation and death.

The prostate gland, that insidious grower with age that so often obstructs one of the necessary outlets of life and robs old manhood of its entitled peace and comfort, has at last found relief in the knife.

White's attempted relief by castration, though a mistake and a failure, was an effort toward the abandonment of that infection carrier and death dealer, the catheter, and blazed the way for that life-saving and comfort giving operation, prostectomy, by Bellfield, an American product, in the year 1886.

Although many surgeons both foreign and American have made meritorious contributions toward perfection since Bellfield's first suprapubic prostatectomy, it remained for Young, by a simplicity of procedure and an invention of instrumentation, to put this operation within the reach of every well equipped surgeon.

#### SURGERY OF THE UPPER ABDOMINAL ZONE.

To whom belongs the credit of exploring the new field of surgical possibilities and do the first cholecystotomy? To that renowned western surgeon, Bobbs of Indiana.

Who were among the first workers here to demonstrate by exploration and observation the real morbid conditions possible to gall bladder, stomach, pancreas and duodenum and the intimate physiological and pathological relation of these viscera? The Mayos.

Who was it that first transferred the treatment of morbid process in this region from medicine, where for centuries only failure and disappointment rewarded their efforts, to surgery with her present day astonishing record of relief? The Mayos.

Who is it not only here but along all surgical lines, that have done a work and made a record that stands forth unique in history to the effect of having reached across the water and brought the surgical mace from the old world to a small town upon the table lands of Minnesota? The Mayos.



Well may American surgery take pride in their accomplishments even at the noon-day of life and predict for them a possible contribution to the science of surgery richer in beneficence than any two men who have gone before.

For far-reaching good, the American surgeon stands the peer of any man, in any vocation, upon the tented field of action. Strike from the science of surgery, the thought and contribution of American brain and you strip it of almost all that is new and original. Take from this science the inventions of American minds and you rob it of its present prestige and glory.

# Journal Missouri State Medical Association

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## EDITORIAL.

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### THE REPORT OF THE COMMITTEE ON PUBLIC HEALTH AND LEGISLATION.

The report of the committee on public health and legislation presented at the Jefferson City meeting deserves the thoughtful consideration of every member of the Association. A study of this report should stimulate greater efforts to obtain needed legislation for the protection of public health, for the establishment of more effective sanitary laws and for the improvement of conditions surrounding the practice of medicine in Missouri. Never in the history of our commonwealth were conditions more favorable for the inauguration of concerted action to obtain some of the needed reforms.

Through the efforts of this committee and because we have a Governor who fully appreciates the great good that will follow from having the medical profession aligned with the government in all that pertains to the conservation of public health, the medical profession is now represented upon all boards of managers of all hospitals for the insane and upon the board of curators of the Missouri State University. This is a proper recognition of the profession and means much in the successful management of these institutions. The proper care of the thousands of inmates in the various hospitals for the insane and the physical well-being of the large number of students in the various departments of the state university require a knowledge of the science of medicine and the application of its principles can be adequate to the conditions only when the medical profession has a voice in the management of these institutions.

The establishment of county boards of health throughout the state is urged in this report. This is an important subject for the

county societies to consider and no time should be lost in establishing a board of health in every county where there is none now in existence. The medical member of the board should have the endorsement of the county medical society so that the entire community may know he is one in whom his confreres have the fullest confidence.

A subject which should receive the immediate attention of the organized profession is the law which permits action for damages for malpractice to be brought against a physician within five years after the alleged malpractice occurs. This law should be amended so that action must be brought within one year. In five years records of cases may be lost or destroyed and circumstances that had a bearing on the conduct of cases forgotten or overlooked; nurses and others whose corroborative testimony would be valuable may be out of reach, and many events may combine to make the physician a possible victim of unscrupulous and designing persons. Every county society should therefore take the first opportunity to urge the representatives in both branches of the legislature to pledge their support to this measure when it is presented.

The committee on public health and legislation is one of the most important branches of the state association but its power for good is largely influenced by the attitude assumed by the county societies and its work is made more effective, or is greatly hampered as that attitude is one of thorough cooperation or of indifference and neglect.

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### NEW COUNCILLORS.

Eight new councillors were appointed members of the Judicial Council at the annual meeting in Jefferson City. The complete list of twenty-six councillors together with the counties assigned to each printed on page 38.

This wise action enabled the Council to redistrict the state and assign a smaller number of counties to each councillor. Heretofore the districts have been so large, contained so many counties that the councillors were unable to do effective work in all, with the result that some were almost completely ignored for want of opportunity to visit them. If thorough work is to be done by the councillor his district must not cover too much territory nor embrace too many counties. No matter how willing he may be to devote time to the work, nor how great his desire to have every county in his district organized and affiliated, he can spare only a portion of his time in visiting the counties. With the number of counties in each district reduced and the geographical distribution such as to permit of easy access the visits of the councillor will be more frequent.

Upon the councillor rests the burden of keeping alive the spirit of

organization. His work does not cease with having organized each county in his district. He must be in close touch with all, striving to direct every effort toward those ends which our organization contemplates and which organized effort alone can accomplish.

Two districts yet remain to be subdivided, the 25th and the 26th. These will be redistricted at the next meeting of the Council.

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The St. Louis Medical Society has obtained the consent of a number of laymen to act as an auxiliary committee to the local committee of public health and legislation. There are 31 lay members of this committee representing men of the highest standing in mercantile pursuits, the legal profession and the ministry.

Through these gentlemen there will be brought to bear a strong influence that cannot fail to have great weight in securing the enforcement of existing laws for the proper control of advertising quacks, disreputable practitioners, and unscrupulous midwives, and for obtaining new legislation as needed.

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In order that the complete proceedings of the annual meeting may be published in this issue it was necessary to omit all reports from county societies. In August we will publish all those reports held over from this month and also all those that are received before July 20th.

It is urged that reporters be quite prompt in sending their reports soon after the meetings so that they can be prepared for the printer and thus facilitate the effort to have the JOURNAL appear promptly on the first of the month.

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The following suggestions were proposed at one of the meetings of the Judicial Council:

Dr. Hypes suggested that the name of the councillor should appear on the program of the meetings of the county societies, and a copy of the program sent to him.

Dr. Overholser suggested that the Chairman be furnished quarterly reports from all members of the Council.

Dr. Dallas suggested that greater attention be given the work of organization in the pages of the journal and less space be devoted to scientific papers.

Dr. Allee suggested that the reporters for county societies give more information in their reports relative to the conditions of the Association in counties, this information to be published. At present reporters have practically nothing to say regarding the work of organization, usually confining their remarks to an abstract of the scientific proceedings of the meetings, etc. He thought it would be more to the interests of the Association if those things affecting organization received much more attention.



MINUTES OF THE  
FORTY-NINTH ANNUAL MEETING OF THE MISSOURI  
STATE MEDICAL ASSOCIATION.

CAPITOL BUILDING, JEFFERSON CITY, MAY 15, 16, 17, 1906.

ADDRESS OF WELCOME.

BY GOVERNOR JOSEPH W. FOLK.

It is my pleasure to welcome this distinguished assemblage to the beautiful capitol city of the best State in the Union. I say the best State in the Union, for Missouri leads not only in the varied fields of human arts and usefulness, but in citizenship and that health that makes the highest type of manhood. It is no idle boast that, "Missourians are born more numerous and die less rapidly than the citizens of other States." Whether or not your learned profession can claim credit for Missouri's superior birth rate, in some measure at least the credit is yours that Missouri's death rate is far less than the average for the United States, the annual death rate per thousand in the United States being 16.3, while in Missouri it is only 12.2 per cent.

I have sometimes thought the Chinese custom of paying a physician as long as one is well, and having his pay stop while his patient is sick, is a very good one. At any rate the Missouri doctor is not like one of Frederick the Great's generals, who declared to his king one day in a fit of desperation: "If I cannot be successful in this war, I am going to give up the profession of arms, go to Italy and practice medicine." "What," exclaimed Frederick, "will you turn assassin?" Nor did the young physician in St. Louis correctly represent the average Missouri doctor, when in filling out the death certificate of his first patient he incorrectly signed his name in the line reserved for "Cause of death." Neither are the Missouri doctors of the kind described in the Scriptures. A friend of mine was arguing with a lawyer that unlike the lawyer who in early ages was allowed to take no fee for his services, the physician has always been permitted to accept pay. In seeking corroboration of his position he turned to his good book and there read in the fifth chapter of Mark and twentieth verse, "and (she) had suffered many things of many physicians, and had spent all that she had, and was nothing bettered but rather grew worse." If she could have procured a Missouri doctor he would have cured her for nothing, for while the Missouri doctor must live and must be paid by his patients that are able to pay, he, if he is a worthy member of the profession, never takes from the poor and the distressed.

From the earliest period of Missouri history the high character of the members of your profession has cast undying luster upon the Commonwealth, and from the time Dr. Joseph Nash McDowell founded

Missouri's first medical college in 1840 down to the present hour, the medical profession of Missouri has ranked with the ablest physicians and surgeons in the United States. Where is the state that can boast of Beaumont, Hodgen, Gregory, McDowell, Linton, and a host of others whose names and reputations are familiar to you all? I say nothing of those brilliant scientific minds that are still amongst you, leaving it to others to chronicle their glory and their fame, but it is a matter of common knowledge that the United States today can offer no superiors to some of the distinguished members of this society.

In the medical history of our State we find much to be thankful for and much to reflect upon with pride. Missouri, that has done so much in other lines, does not lag behind in this one of the noblest and greatest that has fired the genius and tempted the ambition of the human mind. Although it is not generally known, it is a fact that the system of railroad hospitals now in use throughout the United States and in many parts of Europe, was first conceived and established by a Missouri surgeon, the late Dr. J. W. Jackson, the Chief Surgeon of the Missouri Pacific Railroad Company, who established the first railroad hospital at the town of Washington, in Franklin County, and from there the system has spread throughout the civilized world.

Missouri's State Board of Health is given by law the utmost power in preserving the public health. The diseased in mind are cared for at public expense in asylums at Fulton, St. Joseph, Nevada and Farmington, the epileptic and feeble-minded at Marshall. All these are in charge of distinguished and learned members of the profession.

It is now known that the dread disease of consumption can be cured, in its incipient stage particularly, and the State has established a hospital at Mt. Vernon for the most modern and scientific treatment of this scourge.

But States, like men, should never be satisfied in any endeavor: they should ever strive for higher development. It is in the province of this convention to suggest additional measures for preserving the public health, and I assure you it shall be my pleasure to aid you all I can in securing the legislative adoption of any desirable amendments to existing laws that you may submit.

The world owes much to the science of Medicine. This science has advanced more than all others. It is not held down by precedent, but is ever seeking after new means of saving life and relieving pain. Within the past three centuries the average working life of English speaking people has doubled. A few lived as long as men do now, and some strong and favored ones had efficient working powers as long, but the common life was worn out in what is now middle age. Two hundred years ago fifty was a venerable age; now a man at eighty is just getting ripe for the sickle. The factors that have wrought

this change are advanced physical comfort, medicine, hygiene and surgery. In the alleviation of the awful mass of physical pain that has racked every age down to the present, medicine stands incomparably first. The discovery of anaesthetics has done more for human happiness than a hundred kings with all their pomp and power. When Jenner demonstrated the value of vaccine virus in preventing small-pox he made himself a benefactor to the human race and the saviour of untold millions. The knowledge that has been acquired in the use of antitoxine in diphtheria and other diseases is of more value to humanity than the gold discoveries of a thousand years. The progress that has been made in surgery is adding more to the welfare of the human race than the discoveries in all other branches of science combined. Medicine has been going forward with giant strides in the half century just closed.

We are glad to have you with us. Glad to have the city doctor who has done so much with his learning to make life happier, healthier and brighter for those whose fortune it is to live within brick walls and paved streets of populous centers. We are glad to have with us that man who has ever been the advance agent of cheer—the country doctor. This man who gets up on stormy winter nights from a warm bed and rides horseback through the storm and over rough roads for a dozen miles to relieve the suffering, encourage the living and sooth the dying is just as much a patriot as he who bears his breast to the bullets of a public enemy in times of war. May your watchword be “Progress,” and may you in your deliberations be earnest seekers after truth.

Although the most ancient of sciences, medicine as we know it, divorced from superstition, standing alone upon the foundation stone and solid rock of experimental science, is of comparatively recent origin. The epoch making discoveries have all been in comparatively recent years. It does not hinge on rusty rules, but is striking forward ever bolder into the unknown seas of scientific research, daily adding new facts to the store of human knowledge whereby learning is enriched, the world made better and brighter, and the yoke of suffering humanity made lighter and easier to bear. I cannot refrain from expressing to you my sincere admiration for that science and for those whose arduous and self-sacrificing labors have brought it to where it is today. It is therefore in a spirit more than cordial that I greet you now, and in the name of the State you have served so well bid you welcome to Missouri’s hospitable capitol.



## MINUTES OF THE HOUSE OF DELEGATES.

## MAY FIFTEENTH. MORNING SESSION.

The House of Delegates was called to order by the president at 10:30 a. m. The roll call was answered by the following members:

COUNTY.	DELEGATE.	COUNTY.	DELEGATE.
Adair.....	A. E. Grim.	Jefferson.....	A. H. Hamel.
Andrew.....	D. B. Bryant.	Johnson.....	J. I. Anderson.
Audrain.....	R. W. Berrey.	Knox.....	H. J. Jurgens.
Barton.....	G. D. Allee.	Lafayette.....	C. T. Ryland.
Bates.....	T. F. Lockwood.	Madison.....	S. C. Slaughter.
Benton.....	S. O. Davis.	Marion.....	Thos. Chowning.
Boone.....	A. R. McComas.	Mercer.....	Chas. R. Buren.
Buchanan.....	W. T. Elam.	Miller.....	W. S. Allee.
Butler.....	V. Caldwell.	Macon.....	B. J. Milam.
Caldwell.....	Tinsley Brown.	Mississippi.....	G. R. Wallace.
Callaway.....	N. F. Baker.	Moniteau.....	W. R. Patterson.
Cape Girardeau.....	R. F. Wichterich.	Monroe.....	T. B. Lloyd.
Carter-Shannon.....	P. D. Gum.	Morgan.....	A. J. Gunn.
Cass.....	J. S. Triplett.	Nodaway.....	E. L. Crowson.
Cedar.....	J. W. Dawson.	Pemiscot.....	M. B. Hendrix.
Chariton.....	J. H. P. Baker.	Pettis.....	W. J. Ferguson.
Clay.....	H. Rowell.	Phelps.....	S. L. Baysinger.
Clinton.....	Robt. W. Rea.	Pike.....	J. J. Kennedy.
Cole.....	J. L. Thorpe.	Platte.....	Spence Redman.
Cooper.....	R. L. Evans.	Pulaski.....	G. W. Orrick.
Daviess.....	H. E. Songer.	St. Clair.....	W. E. Bell.
Dent.....	W. E. Rudd.	Saline.....	J. E. Harris.
Franklin.....	Chas. F. Briegleb.	Scotland.....	A. E. Platter.
Gasconade-Maries-Osage.....	W. E. Seba.	Shelby.....	Chas. Chapman.
Gentry.....	C. N. Barger.	St. Louis.....	Roy D. Moore.
Grundy.....	W. H. Winningham.		P. Y. Tupper.
Henry.....	Wm. H. Gibbins.		J. C. Morfit.
Holt.....	T. O. Davis.		W. W. Graves.
Howell.....	J. W. Bingham.		J. S. Myer.
Iron.....	Ira E. Marshall.		M. B. Clopton.
	F. L. Cook.		H. W. Soper.
	N. P. Wood.		F. L. Henderson.
Jackson.....	J. M. Frankenburger.		John Green, Jr.
	William J. Frick.	Vernon.....	J. R. Buchanan.
	F. E. Murphy.	Wayne.....	W. S. Bailey.
Jasper.....	R. L. Neff.	Worth.....	W. E. McKiuley.

The report of the committee on medical education as read by the chairman, Dr. Woodson Moss, was adopted. (See page 50.)

Dr. J. F. Welch introduced the following resolution which was adopted:

*Resolved*, That it is the sense of this meeting of the Missouri State Medical Association that the Board of Curators of the State University should, at the earliest favorable opportunity, establish the clinical instruction of the Medical Department in one of the large cities of the State; and we especially endorse the plan of establishing a Graduate Medical School, which would supply a long-felt want in this section of the country.

The report of the committee of arrangements was read by the chairman, Dr. G. Ettmueller. (See page 45.)

The report of the committee on scientific work was read and referred to the Judicial Council. (See page 47.)

The report of the committee on public health and legislation was read by the chairman, Dr. Lutz. On motion the report was accepted and referred to the Judicial Council. (See page 48.)

The report of the publication committee was read and referred to the Council. (See page 54.)

On motion adjourned to 2 p. m.

## AFTERNOON SESSION.

The House of Delegates was called to order at 2 p. m.

The treasurer read his report which was referred to the Judicial Council. (See page 59.)

The Secretary read his report (see page 55). On motion the report was accepted and a vote of thanks by rising vote, was tendered the secretary for his efficient services and exhaustive report.

The nominating committee was appointed as follows: Tinsley Brown, W. J. Ferguson, J. W. Heddens, R. L. Johnson, A. H. Hamel, B. J. Milam, M. P. Overholser, W. H. Stauffer, U. S. Wright.

Dr. H. E. Pearse introduced the following resolution which was adopted:

*Resolved:* That the Secretary of each county society in this State be authorized by this Association to publish at least once each week in a paper of large circulation in such County, a roster, or list, containing the names of the members of the County Medical Society, stating that they are members in regular standing of the State Medical Association and are eligible for membership in the National Association.

Dr. W. S. Allee introduced the following resolution which was adopted:

*Resolved:* That the Missouri State Medical Association express its high appreciation of the high policy and broad statesmanship displayed by his excellency Gov. Jos. W. Folk in giving representation on the various state hospitals for the insane, and on the Board of Curators, to the medical profession.

We recommend his action because we know it to be for the best interest of the people.

On motion the following resolution was adopted:

*Resolved;* That the House of Delegates instruct its members to ask their respective county medical societies to use their influence to pledge their senators and representatives to the passage of the law recommended by *Collier's Weekly* and *Ladies' Home Journal* in reference to patent nostrums.

An amendment to the by-laws as follows was introduced by Dr. T. H. Doyle:

Section 2, Article VIII, be so amended as to read, "The Councillors shall be elected for terms of five years each, being so divided that four shall be elected each year, and no Councillor shall be eligible to any other office named in this section."

Dr. E. Lowery was appointed chairman of the surgical section and Dr. Jno. P. Burke was appointed chairman of the medical section.

On motion a committee of five members, the president to be chairman of the committee, was appointed to confer with similar committees which have been named by the medical associations of Kansas, Texas, Indian Territory, Oklahoma and Arkansas, for the purpose of organizing a medical association of the Southwest embracing these states and territories. The president appointed the following members: Dr. Jabez N. Jackson, Dr. W. J. Ferguson, Dr. J. I. Anderson,

Dr. Chas. Wood Fassett, Dr. J. H. Thompson, Dr. F. J. Lutz.

Dr. Dorsett moved that the election of delegate to the American Medical Association be postponed to Thursday morning. Amended to elect tonight. Carried.

On ballot Dr. W. J. Frick, of Kansas City, was elected delegate to the American Medical Association with Dr. O. B. Campbell, of St. Joseph, as alternate.

On motion adjourned to 8:30 Wednesday morning.

#### MAY SIXTEENTH.

The House of Delegates convened at 8:30 a. m.

The Judicial Council reported as follows:

The Judicial Council has held several meetings and beg report as follows:

The Treasurer's accounts have been audited and found correct.

A study of the report of the committee on publication, referred to the Council by the House of Delegates, shows that the whole expense of publishing the JOURNAL during the past fiscal year has amounted to \$2975.93, being at the rate of \$1.30 per member. This includes the salary of the editor. Other expenses of the Association amounted to \$687.96 leaving a balance in the treasury of \$216.11 from the total of \$3880.00 collected by the Treasurer.

It has been found that the councillor districts embraced too much territory to permit of good work being done in each of the counties assigned to the councillors and the Council recommends the division of the districts and the appointment of councillors to the number of twenty-six.

In order to reduce the expense of publishing the JOURNAL it is recommended that the JOURNAL never exceed 64 pages in any one month, as specified in the original contract. It is also suggested that the JOURNAL devote more space to the work of encouraging organization and not fill up the pages with scientific papers; that county societies report through the pages of the JOURNAL what progress is being made in the direction of organization in the respective counties and limit the remarks concerning the papers read and the character of scientific work done.

For editor of the JOURNAL the Council has elected Dr. E. J. Goodwin.

The publication committee should exercise a more direct control over the character of matter published in the JOURNAL and therefore the Council recommends that this committee supervise and approve all matter appearing in the JOURNAL, both text matter and advertisements.

The contract for publishing the JOURNAL will expire on June 30, 1907, and in the interim the Council will endeavor to enter into some arrangements more favorable in its bearings financially than now



obtains. To this end the secretary has received bids from certain printers and the Council will analyze these bids and with the approval of the House of Delegates make the best arrangement in its power for continuing the publication of the JOURNAL.

The present contract calls for two columns to a page. The Council believes one column to the page will add greatly to the appearance of the JOURNAL and increase the amount of composition per page. We therefore recommend that the style of page be changed from two columns to one column.

The publishing committee named for the ensuing year consists of Dr. C. M. Nicholson, chairman, Drs. B. M. Hypes, W. B. Dorsett and W. G. Moore.

For Chairman of the Council Dr. Lutz was reelected and Dr. Goodwin was elected special secretary of the Council.

Dr. C. M. Nicholson was elected general secretary of the Association. As assistant secretaries of the general body the Council named those gentlemen who are elected secretaries of the two sections.

The amendment to the constitution introduced last year should be voted upon. This was to the effect that the Chairman of the Judicial Council and the General Secretary of the Association shall approve all bills presented to the association for payment.

On motion the report was adopted.

The nominating committee reported as follows and the report was adopted:

For Vice Presidents: F. W. Allen, Callao; W. G. Cowan, Sedalia; C. J. Orr, St. Louis; E. H. Thrailkill, Kansas City; H. L. Ried, Charleston.

Committee on Scientific Work: C. M. Nicholson, Chairman; J. C. Morfit, St. Louis; F. E. Murphy, Kansas City.

Committee on Public Health and Legislation: F. J. Lutz, St. Louis, Chairman; Geo. Homan, St. Louis; H. E. Pearse, Kansas City.

On motion Jefferson City was named as the place of the next meeting.

On motion a vote of thanks for the cordial reception and welcome given to the Association was tendered the people of Jefferson City, the committee of arrangements and to Hon. Mat Hall, for the splendid manner in which the Association had been entertained and cared for during the meeting.

On motion it was decided that in future the registrar be provided with the names of all members and of the county society through which they are affiliated, so that as members register, their names may be compared with the list of members of the county society before a badge of membership shall be given to them.

The following resolution was adopted:

*Resolved* that the committee on publication of the JOURNAL MISSOURI STATE MEDICAL ASSOCIATION is hereby instructed to place at the disposal of the librarians of the medical libraries of St. Louis and

Kansas City one copy for exchange with the journals of the states and territories publishing periodicals or volumes of their transactions.

*Resolved*, that all books and pamphlets received by the JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION for review, or in exchange, shall be distributed in equal parts between the medical libraries of St. Louis and Kansas City and at the annual meeting the editor shall make an itemized report to the Council of the volumes, pamphlets and exchanges which were apportioned under this resolution.

Amended by motion to read that books be distributed to all medical libraries in the state.

Dr. Lutz moved that each county society be requested to elect one of their members as a member of the committee on public health and legislation to work in conjunction with the same committee of this association. Carried.

Dr. C. Lester Hall moved that a committee of five be appointed to present to the next meeting of the Legislature the subject of reducing the time in which malpractice suit may be brought against physicians to one year.

Amended to refer the matter to the committee on legislation. Carried.

Nominations for orator in medicine resulted in the election of Dr. Wm. F. Kuhn, of Farmington.

For orator in Surgery Dr. Paul Y. Tupper, of St. Louis, was elected.

Dr. Pearse moved that county societies be requested to elect the member to the committee on public health and legislation in time for the member to meet with the committee on the 10th day of July, in St. Louis. Carried.

Dr. Moss moved that the Association in future relieve the committee of arrangements of all expense connected with the general meetings. Carried.

The following resolution was adopted:

In view of the exacting and vital character of the services rendered in the medical examination of life insurance risks, affecting as they do the validity of the contract, and, in fact, determining the grounds upon which the contract may be entered into, we the representatives of the medical profession of the State of Missouri, in convention assembled, hereby enter our protest against, and condemnation of the recent action of the Life Insurance Companies in reducing the fee for Medical Examinations.

That there existed necessity for reform in the management of those corporations, especially in the curtailing of unnecessary expenses and extravagance in other departments in the management and disposition of the trust funds given into their keeping will not be denied; but in all the recent exposures of extravagance, corruption and graft, none of the departments were found so inadequately remunerated and yet so universally free from corruption or criticism, as the medical department of the companies investigated with such well known revelation: Therefore, be it



*Resolved*, 1st, that we insist on a just compensation for medical examinations made for life insurance companies.

2nd, *Resolved*, that we further recommend that each of the county societies and each individual reputable physician take action on this matter and demand and insist on a just compensation for the work of examining and giving opinions on risks.

3rd, *Resolved*, that we refuse to endorse any physician in this State, as medical examiner, who lowers the standard and dignity of the profession by examining at reduced rates, or who shall not be a consistent member of his home County Society.

4th, *Resolved*, that a copy of these resolutions be sent to the Secretary of each of the County Medical Societies in the State of Missouri, and to each of the Life Insurance Companies doing business in the State of Missouri.

Dr. Tupper read a communication from California physicians.

On motion the president and secretary were instructed to tender to the suffering physicians of San Francisco on behalf of this body expressions of sympathy in their affliction.

Mr. Whitecotton ex-speaker of the house of representatives introduced the following resolution which was adopted.

That we recommend to Governor Folk the calling of an extra session of the General Assembly for the purpose of preparing and submitting a Constitutional Amendment providing for a road and bridge tax, which shall be voted upon by the people of Missouri at the general election in November, 1906.

On motion a committee of ten members was appointed to wait upon the Governor and make such representations as seemed expedient to further the cause. Carried.

The President appointed the following gentlemen: Drs. Elam, Moss, Loyd, Howard, Chowning, C. L. Hall, Lutz, Sam Brown, Tinsley Brown, Hough.

On motion the following resolution was adopted:

*Whereas*: Death has invaded our ranks and removed from our midst one of our members of the Missouri State Medical Association at the hour appointed that he should address us in his scientific paper on Typhoid Fever, therefore be it

*Resolved*, that in the death of Dr. R. P. Davis the Missouri State Medical Association has lost a valuable member, an earnest and conscientious worker whose greatest pride and pleasure was when in a medical meeting; that this society has lost a noble gentleman and that we extend our heartfelt sympathy to his family in their sad bereavement. And further that a copy of this resolution be spread upon the minutes; also that a copy be sent to the family of the deceased and a copy to his home paper.

Respectfully submitted by your committee,

JOS. M. HALE, M. D.,

SPENCE REDMAN, M. D.,

C. H. CHASTAIN, M. D.,

C. R. WOODSON, M. D.,

On motion adjourned.

## MINUTES OF THE JUDICIAL COUNCIL.

## MAY FIFTEENTH, MORNING SESSION.

The Judicial Council was called to order by the chairman at 10:30. The roll call showed nine members present as follows: Drs. Miller, Wallace, Dallas, Moss, Lutz, Norwine, Allee, Overholser, Johnson.

Dr. Norwine introduced Dr. A. H. Hamel of De Soto. Dr. Hamel stated to the Council that smallpox was rife in his district and that the authorities were not doing anything to control the spread of the disease. He asked that the Council offer some suggestions for relief.

The Council decided that it had no authority to act in any manner and suggested that Dr. Hamel notify the state board of health.

Adjourned.

## AFTERNOON SESSION.

The Judicial Council was called to order at 4:20 p. m.

Drs. Haire, Hypes, and Dallas were appointed an auditing committee to audit the treasurer's accounts.

The report of the Publication committee as referred by the House of Delegates was taken up. It was found that the total expense of publishing the journal for the fiscal year was \$2,975.93, being at the rate of \$1.30 per member; other expenses, \$687.96, leaving a balance of \$216.11, out of a total of \$3,880.00 collected by the treasurer.

It was moved that the number of councillors be increased to 28. Carried.

Adjourned to 10 p. m.

## EVENING SESSION.

Convened 10 p. m., in Madison Hotel. The division of the districts was then taken up and the following assignments made and councillors elected.

1st District. Councillor, E. E. Parrish, Memphis. Counties. Clark, Scotland, Schuyler.

2nd District. Councillor, H. Jurgens, Edina. Counties: Adair, Knox, Lewis.

3rd District. Councillor, J. D. Brummall, Salisbury. Counties: Chariton, Carroll, Livingston, Linn.

4th District. Councillor, C. R. Buren, Princeton. Counties: Grundy, Sullivan, Mercer, Putnam.

5th District. Councillor, E. H. Miller, Liberty. Counties: Platte, Clay, Ray, Clinton, Caldwell, Daviess.

6th District. Councillor, W. E. McKinley, Denver. Counties: Harrison, Worth, DeKalb, Gentry.

7th District. Councillor, W. T. Elam, St. Joseph. Counties: Buchanan, Holt, Atchison, Nodaway, Andrew.

8th District. Councillor, L. W. Dallas, Hunnewell. Counties: Shelby, Marion, Ralls.

9th District. Councillor, C. W. Reagan, Macon. Counties: Macon, Randolph, Monroe.

10th District. Councillor, Woodson Moss, Columbia. Counties: Audrain, Boone, Howard, Callaway, Warren, Montgomery.

11th District. Councillor, W. B. Dorsett, St. Louis. Counties: Lincoln, St. Charles, St. Louis, Pike.

12th District. Councillor, F. J. Lutz, St. Louis. Counties: Franklin.

13th District. Councillor, B. M. Hypes, St. Louis. Counties: Jefferson, St. Genevieve, Perry.

14th District. Councillor, Wm. F. Kuhn, Farmington. Counties: Washington, Reynolds, Iren, St. Francis.

15th District. Councillor, J. J. Norwine, Poplar Bluff. Counties: Mississippi, New Madrid, Wayne, Stoddard, Dunklin, Butler, Ripley, Carter, Pemiscot.

16th District. Councillor, J. D. Porterfield, Jr., Cape Girardeau. Counties: Scott, Madison, Cape Girardeau, Bollinger.

17th District. Councillor, W. S. Allee, Olean. Counties: Miller, Moniteau, Morgan, Camden.

18th District. Councillor, G. Ettmueller, Jefferson City. Counties: Cole, Osage, Maries, Gasconade.

19th District. Councillor, R. D. Haire, Clinton. Counties: Pettis, Henry, Benton, St. Clair, Hickory.

20th District. Councillor, C. T. Ryland, Lexington. Counties: Lafayette, Saline, Cooper.

21st District. Councillor, M. P. Overholser, Harrisonville. Counties: Jackson, Cass, Johnson.

22nd District. Councillor, J. R. Buchanan, Nevada. Counties: Bates, Vernon, Barton.

23rd District. Councillor, A. R. Snyder, Joplin. Counties: McDonald, Newton, Jasper, Cedar, Dade.

24th District. Councillor, R. L. Johnson, Rolla. Counties: Crawford, Phelps, Dallas, Pulaski, Laclede, Dent.

25th District. Councillor, J. E. Tefft, Springfield. Counties: Greene, Lawrence, Christian, Stone, Barry, Webster, Polk, Taney.

26th District. Councillor, H. C. Shuttee, West Plains. Counties: Howell, Ozark, Oregon, Texas, Wright, Shannon, Douglass.

Moved that the JOURNAL be confined to the size of 64 pages of reading matter each month as specified in contract. Carried.

Motion was made that all reports from county societies be edited so as to eliminate all unnecessary matter. Carried.

Dr. Overholser moved that Dr. E. J. Goodwin be appointed editor of the JOURNAL. Carried.



Dr. Welch was reelected treasurer by acclamation.

Dr. Wallace moved that the publication committee supervise and approve all matter published in the JOURNAL, both text and advertising. Carried.

Adjourned.

MAY SIXTEENTH.

The Judicial Council was called to order by the chairman at 8 p.m.

On motion the division of the 17th and 18th councillor districts (old numbers) was referred to the executive committee with power to make the division and appoint councillors. Carried.

Dr. Overholser moved that the bids for publishing the JOURNAL after the expiration of the present contract be brought up in meeting of the publication committee and that committee be instructed to prepare recommendations and present the same to the Council for action at some future meeting. Carried.

Moved that the Publication committee be authorized to change the style of page in the JOURNAL from two columns to one column. Carried.

Dr. Moss moved that the present publication committee be continued for the ensuing year.

Amended to substitute the name of Dr. W. G. Moore for that of Dr. Lutz. Carried.

It was moved that a special secretary for the Judicial Council be elected. Carried.

On motion Dr. E. J. Goodwin was elected special secretary of the Council.

Dr. Lutz was reelected chairman of the Council.

On motion Dr. C. M. Nicholson was reelected general secretary of the Association.

The auditing committee reported that the books of the treasurer had been found correct. Report accepted.

It was moved that the bond of the treasurer be renewed and the treasurer be authorized to draw his check for the cost of the premium. Carried.

On motion the treasurer was authorized to reduce his bond to \$4000.00.

Dr. Nicholson presented a bill from Dr. Chambliss, member of the committee on scientific work, for expenses incurred while traveling to attend meetings of the committee. Moved and carried that the bill be approved and recommended for payment.

On motion the salary of the editor was placed at \$50.00 per month.

Dr. Moss moved that the secretaries of the two sections be elected assistant secretaries of the Association. Carried.

Moved that the editor be instructed to publish in the JOURNAL the suggestions made by Drs. Hypes and Allee, and other practical sug-



gestions, in regard to the scope of the JOURNAL, but these not to be made a part of the records of the Council's proceedings. Carried.

Dr. Nicholson moved that the editor be instructed to have printed in the JOURNAL a list of the names of the members registered at this meeting. Carried.

The secretary was instructed to notify all members of the council not present to hand in their expense accounts.

On motion adjourned.

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## GENERAL ASSEMBLY.

### MAY SIXTEENTH. EVENING SESSION.

The general assembly convened at 8 p. m.

President Gore read his annual address (see page....). Dr. W. G. Moore, delivered the oration in Medicine (see page....) and Dr. C. H. Wallace delivered the oration in surgery (see page....).

On motion adjourned to attend the reception at the Governor's mansion.

### MAY SEVENTEENTH. MORNING SESSION.

The association proceeded to elect a president for the next year with the following result: First ballot C. H. Wallace 87, C. R. Woodson 48, W. S. Allee 34.

On the next ballott Dr. Wallace was elected president. Drs. Woodson, Campbell and Miller were appointed to escort Dr. Wallace to the chair.

### AFTERNOON SESSION.

The President appointed Dr. W. G. Moore and Dr. Walter B. Dorsett, St. Louis, a committee to escort the newly elected president to the chair.

It was suggested by Dr. Reynolds that the members of the Association take into consideration the advisability of issuing a certificate of membership to all members of the Association.

On motion by Dr. Hall, Kansas City, a vote of thanks was tendered the retiring president for his faithful and efficient services during his term of office.

Moved by Dr. W. G. Moore, of St. Louis, seconded and carried, that a vote of thanks be tendered the chief executive of the state for his cordiality and his support of the Association and that a similar vote be tendered the committee of arrangements.

Adjourned.

## MEDICAL SECTION.

Dr. Jno. P. Burke, Chairman.

Dr. Gail Allee, Secretary.

## WEDNESDAY, MAY SIXTEENTH. MORNING SESSION.

Dr. Scott P. Child read a paper entitled "The Nervous System of the Child in Relation to its Development." Discussion by Dr. C. R. Woodson, St. Joseph, Dr. W. F. Kuhn, Farmington, Dr. John Punton, Kansas City, Dr. Woodson Moss, Columbia.

"The Use and Abuse of the Obstetrical Forceps", was the title of a paper read by Dr. A. L. Gray, St. Joseph. Discussion by Dr. W. S. Allee, Olean, Dr. W. E. McKinley, Denver, Dr. — Hale, Dearborn, Dr. A. H. Vandivert, Bethany, Dr. B. M. Hypes, St. Louis, Dr. — Donovan, Capplinger's Mills, Dr. Ryland, Lexington, Dr. McGuire, Arrowrock.

Dr. J. B. Norman, California, read a paper entitled Intestinal Auto-intoxication. On motion the chair appointed a committee to draw up resolutions on the death of Dr. R. P. Davis.

The chairman appointed: Drs. C. R. Woodson, J. M. Hale, C. M. Chastain and S. Redman.

Adjournment until 1:30 p. m.

## AFTERNOON SESSION.

The following papers were read: "The Best Time to Give Quinine," by Dr. R. L. Johnson, Rolla. Discussion by Dr. C. M. Mitchell, Blythedale.

"Criminal Abortion," by Dr. T. F. Lockwood, Butler. Discussion by Drs. C. H. Chastain, Weston, Thomson, Armstrong, Pittman, Kirkwood, J. T. Anderson, Cornelius, W. G. Moore, St. Louis, Joseph Grindon, St. Louis, W. R. Patterson, Tipton, A. H. Vandivert, Bethany, Crawford, Eldorado, A. L. Gray, St. Joseph, A. C. Reynolds, Martinsville.

"Malaria," by Dr. T. C. Allen, Bernie. Discussion by Drs. H. E. Pearse, Chas. F. Briegleb.

"Broncho-Pneumonia," by Dr. T. O. Davis, Maitland. Discussion by Dr. Woodson Moss, Columbia.

"The Present Status of Psychotherapy," by Dr. Dora Green-Wilson, Kansas City. Discussion by Drs. C. M. Mitchell, Blythedale, C. R. Woodson, St. Joseph, John Punton, Kansas City, T. J. Rigdon.

"Cough," by Dr. J. C. Buckwalter, St. Louis. Discussion by Drs. Kannady, St. Louis, and Blakesley, Kansas City.

Moved by Dr. Woodson Moss, seconded and carried, that the first order of business Thursday morning be the election of chairman and secretary of the section for the following year.

Adjournment at 5:30.

## THURSDAY, MAY SEVENTEENTH. AFTERNOON SESSION.

The following papers were read at this session:

"The White Plague," by Dr. H. Jerard, Pleasant Hill. Discussion by Dr. W. S. Allee, Olean.

On motion further discussion was postponed until after the reading of Dr. Bayliss's paper.

Moved by Dr. J. Franklin Welch, that Dr. J. H. P. Baker, of Salisbury, be nominated for chairman of the medical section during the following year. Seconded and carried.

Moved by Dr. Welch, seconded by Dr. W. S. Allee, that Dr. Baker be elected by acclamation. Carried.

Moved by Dr. W. S. Allee, seconded and carried, that Dr. Vandivert be elected by acclamation vice-chairman of the section.

Moved, seconded and carried that Dr. Gail Allee, of Lamar, be elected by acclamation secretary of the section for the following year.

The Chairman read a telegram from the Illinois State Medical Association expressing to the Missouri State Medical Association greetings and congratulations.

Moved by Dr. Gore, seconded and carried that the secretary address a telegram of congratulations to the Illinois State Medical Association.

"The Missouri Sanatorium for the Treatment of Incipient Tuberculosis, and Its Legal Foundation," by Dr. W. M. Bayliss, Mt. Vernon. Discussion of this paper and the paper read by Dr. Jerard, by Drs. William Porter, St. Louis, J. M. Allen, Liberty, C. J. Morrow, Kansas City, A. H. Vandivert, Bethany, C. M. Mitchell, Blythedale.

Dr. B. H. Zwart, Kansas City, moved that a committee of three be appointed by the chair to look into the medical phase of tuberculosis and that the morning of the second day of the next meeting be devoted to a consideration of tuberculosis from a medical standpoint. Seconded and carried. The Chair appointed on this committee Dr. Wm. Porter, chairman; Drs. J. M. Allen, W. S. Allee, B. H. Zwart.

Discussion continued by Dr. Stewart, Holstein.

"Arteriosclerosis," by Dr. Tinsley Brown, Hamilton.

It was moved by Dr. Bayliss, seconded and carried that, inasmuch as Dr. Allen was instrumental in the organization of the Association in 1866, that he was the first man to recommend to the Legislature the necessity for a state board of health and that he was the first man to recognize the necessity for medical examination, the time being limited, the discussion be closed and Dr. Allen requested to read his paper.

Moved by Dr. W. S. Allee, seconded and carried, that the remaining papers be read by title.

"The Importance of the Sigmoid Flexure in the Production of Enteroptosis, Pelvic Displacement and Reflex Phenomena," by Dr. J. M. Allen, Liberty.

Adjournment.



## SURGICAL SECTION.

WEDNESDAY, MAY SIXTEENTH. MORNING SESSION.

Dr. E. Lowrey, Chairman.

Dr. McDonald, Secretary.

Dr. O. B. Campbell read a paper on "Anterior Vaginal Celiotomy," which was discussed by Drs. Pearse of Kansas City, Funkhouser of St. Louis, Dorsett of St. Louis, Hertzler of Kansas City, Hall of Kansas City, Newman of St. Louis, Kieffer of St. Louis, and Tupper of St. Louis.

Dr. H. C. Dalton read a paper on "Abdominal Injuries," which was discussed by Dr. J. D. Griffith of Kansas City, Geiger of St. Joseph, McCandless of St. Louis, Campbell of St. Joseph, A. C. M. Coffee, Kennedy of St. Louis, and Pearse of Kansas City.

AFTERNOON SESSION.

Dr. W. T. Elam read a paper on "Suprapubic Cystotomy as Preliminary to and as a Route for the Performance of a Considerable Number of Prostatectomies," which was discussed by Drs. Martin of Kansas City, Beedle of Kansas City, A. C. M. Coffee, Broome of St. Louis, Griffith of Kansas City, Morfit of St. Louis, Geiger of St. Joseph, and Cameron.

Dr. J. D. Seba read a paper on "Spina Bifida," which was discussed by Drs. Boulware, Geiger of St. Joseph, and Childs.

Dr. H. Jurgens read a paper on "Suppuration of the Superior Maxillary Sinus with Involvement of Ethmoidal Cells and Sphenoidal Sinuses."

Dr. W. B. Dorsett read a paper entitled "An Unusual Retroperitoneal Tumor in the Mesocolon Simulating a Fibroid of the Uterus," which was discussed by Drs. Geiger of St. Joseph, Hertzler of Kansas City, and Funkhouser of St. Louis.

Dr. E. G. Mark read a paper on "Pyuria," which was discussed by Drs. Griffith of Kansas City, Kieffer of St. Louis and Pearse of Kansas City.

Dr. G. W. Broome read a paper on "Limitations of Surgical Procedure in Cancer," which was discussed by Drs. Hall of Kansas City, Campbell of St. Joseph, Seba of Bland, Jackson of Kansas City, Dorsett of St. Louis, Funkhouser of St. Louis.

THURSDAY, MAY SEVENTEENTH. AFTERNOON SESSION.

The Chairman being absent, Dr. W. B. Dorsett was elected temporary chairman.

Dr. T. C. Witherspoon was elected Chairman for the coming year.

Dr. E. A. Wood was elected vice-Chairman.

Dr. McDonald was elected Secretary.

Dr. Pearse made a motion requesting the Chairman and Secretary



to formulate a set of rules for the conduct of the business of the section. Motion seconded and carried.

Dr. H. S. Crossen read a paper entitled "Some Questions Concerning the Treatment of Uterine Fibromyomata."

Dr. Bartlett of St. Louis moved that there be no further discussion of papers read, owing to the fact that the section was so far behind its work. Seconded and carried.

Dr. A. F. Hertzler discussed briefly "The Treatment of Retroflexion of the Uterus."

Dr. W. Bartlett read a paper on "Lessons to be Drawn from Recent operations on the Stomach."

Dr. C. G. Geiger read a paper on "Appendicitis."

Dr. M. P. Shy read a paper on "The Country Doctor and Appendicitis."

Dr. W. H. Stauffer read a paper on "The Importance of Post-Operative Treatment in Diseases of the Rectum."

Dr. Roland Hill read a paper on "Intestinal Obstruction from Tubercular Peritonitis."

Dr. Herman E. Pearse read a paper on "A Method of Operating in Inguinal and Femoral Hernia When Complicated by Abscesses."

Dr. Robert Barclay read a paper on "A Method of Radical Relief of Cases of Deafness Long Abandoned as Hopeless, Illustrated by Report from Actual Practice."

Dr. John C. Morfit withdrew his paper on "Surgical Problems in Spinal Trauma," stating that he desired to have a discussion.

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## REPORT OF COMMITTEE OF ARRANGEMENTS.

Your committee on arrangements beg leave to report as follows: The Commissioners of the permanent seat of Government have kindly granted to this Association the use of the Hall of Representatives and the Senate chamber, with no expense to the Association except for janitor service. There is no city in the state, which can furnish equally as good and commodious accommodations, and this is a strong point for making the Capitol city the permanent meeting place.

As no means were placed at our disposal and the treasury of the Association was reported nearly exhausted, we resorted to charging exhibitors a small amount for space. The income from this source is more than sufficient to defray the expenses of this meeting.

The Secretary furnished us with about 2,300 reprints of the program, as published in the JOURNAL. These we sent out together with a letter of invitation, urging the attendance of the members. It required 2,270 postage stamps, to mail the programs, and it seems therefore

that this number indicates a membership of 2,270, a wonderful gain for the last year.

Following a custom permitted to prevail during the last twenty years, we accepted an offer from the Blee-Moore Instrument Company, to furnish the badges for this meeting. They assumed the contract we had already made with a firm in St. Louis through the kindness of Dr. Nicholson, for a plain stick-pin; they have added the bar and ribbon. The change was made by a sub-committee. When I learned about it, I informed Dr. Nicholson, who reported the matter to the members of the Council, and informed me later that the Council had unanimously decided against the acceptance of the offer. We received this information at so late a date, that we could not comply with the decision of the Council; the badges were then already awaiting our disposition. To avoid a repetition of such an occurrence the best way seems to be, that the Association adopt a button, of some value, to be used for all occasions and at all times, to be distributed to the members by their respective county societies, and its cost paid for by the individual member.

We have established a bureau of information at the Madison Hotel; there we have a list of rooms in private families, which may be had with or without board. There is no need that you crowd together anywhere, as there are more desirable rooms at our disposal than needed. We also have an ambulating bureau of information. Whenever you see a gentleman, wearing a white badge like this, he is a member of our county society, and will be delighted to give you all the information you may want.

The bureau of registration is in the rotunda of the Capitol. Don't forget to register there, to deposit your railroad certificate, and get your badge.

You have come here not only for the purpose of listening to papers, but you want to have an opportunity to meet old and new acquaintances, to spend a few hours in friendly discourse, to see the city you visit, to meet her people, and to forget for a few days the cares and worries of your professional life.

This at least, was our idea, and we have tried to arrange for the few hours, so scantily given for social features, a program that will prove of interest and pleasure to you. That we are able to do this we owe to the kindness of Governor Folk, Warden Hall, Mr. F. H. Binder, and our citizens generally.

We have the pleasure to announce that Mr. Matt. Hall, the efficient warden of the state prison, and an honorary member of the Association, extends to you and the ladies a cordial invitation to spend the evening at his residence to-night, between the hours of eight to eleven p. m.

He will open the gates of the State penitentiary tomorrow even-

ing at 6:30 p. m., and admit you without any commitment papers, and after showing you around, have you taste the food as it is served to the convicts. He will also be kind enough to let you pass out again, as with the cleanliness you will observe to prevail throughout the buildings and courts, and the wholesome food served, he has no need for doctors.

Governor Folk will address the Association tomorrow morning at nine o'clock. He also tenders you a reception at the mansion tomorrow night, after you have listened to the address of the president, and the addresses in medicine and surgery.

The Sisters of St. Mary send you a cordial invitation to visit their beautiful hospital, just erected. Do not mind to miss your meal at the hotel in going there, as the sisters will be prepared to serve you a substantial lunch at any time.

For the last evening we have with the help of our citizens arranged for an outing. We will take you over a part of our city, passing the County Court house, post office, the new Supreme Court building, in course of erection, one of the new shoe factories, the St. Mary's hospital, etc., to the private park of Mr. F. H. Binder. Here you will meet the men, entrusted by the will of the people with the administration of our State affairs, the eminent jurists constituting the Supreme Court and many of our citizens and families.

We hope you will enjoy the outing. Inhale the pure air, breezing over the hills of the Missouri, partake of the delicious supper which Dr. Thorpe and corps of experienced assistants will have prepared for you, forget the dignity of your profession for a while and let hilarity and good feeling prevail.

*Respectfully,*

GUSTAV ETTMUELLER,

Chairman Committee on Arrangements.

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## REPORT OF COMMITTEE ON SCIENTIFIC WORK.

Your committee on Scientific Work sent invitations last October to the Secretaries of all affiliated societies requesting them to report names of members who desired to contribute to the program of the annual meeting of the Association to be held in Jefferson City, May, 1906. Titles of papers were received from 69 and your committee held a special meeting at which all members were present, for the arrangement under different sections. Sixty-nine gentlemen were invited and accepted the invitation to open the discussion.

The committee published the preliminary program in the February issue of the JOURNAL and the official program in the April and May



numbers; also sent advance sheets to the *St. Louis Medical Review*, *Medical Fortnightly*, *Interstate Medical Journal*, *Medical Herald* and *Kansas City Medical Index*, so that additional publicity might be given by these periodicals. Three thousand copies of a 12 page program were printed and 2,270 copies with an equal number of addressed envelopes sent to the Cole County Medical Society, who mailed them with a circular letter from that society. The cost of printing from the Journal type was \$28.50. As the correspondence was done from the office of the secretary no expenses except as above stated have accrued.

This committee takes pleasure in presenting a program containing more than twice as many contributions as last year.

Respectfully submitted,

C. M. NICHOLSON, Chairman.

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## REPORT OF THE COMMITTEE ON PUBLIC HEALTH AND LEGISLATION.

Your committee on Public Health and Legislation is much gratified to report some of the tangible results of organization which have been accomplished during the past year: Although well known to all of you, your committee desires simply to record the fact that the medical profession of this state is represented upon all the Boards of Managers of the Hospitals for the Insane as well as the Board of Curators of the Missouri State University. Next to the efforts in this direction of the organized profession, the high appreciation which Governor J. W. Folk has of the services of the medical profession in the cause of humanity and education, are to be credited with the accomplishment of this result. There are other directions, however, in which the organized profession can exercise a potent influence in public affairs as they relate to the preservation of the health and the comfort of the people of this state as well as in furtherance of the commercial prosperity and advancement of this commonwealth. No more important subject is to be considered than the relationship which the Board of Health should bear to the state and to the county associations. The members of the Board of Health are the representatives of the medical profession—their servants and subject to their direction and advice, but this must not be given spasmodically and by individuals with the hope of accomplishing good results. It should rather be done in a systematic organized manner. The county medical society should be in close touch with the medical member of the County Board of Health, where one exists, and where no County Board of Health has been established it should be one of the duties of the county society to



see to it that steps are immediately taken to this end.

Upon the Board of Health rests the grave responsibility, under the law, of admitting to the practice of medicine those who after examination are found properly qualified. The Board of Health acts in a dual capacity as a Board of Examiners and as a Board of Health. In both capacities it should receive the organized cooperation of this association.

When last year your committee was instructed to draft a suitable law whereby part of the responsibility of the Board of Health would be borne by the State Medical Association by making it the duty of this organization to submit to the appointing power a list of names from whom to select appointees, your committee was unfamiliar with the law or rather its interpretation, according to which under the constitution, the appointing power of the Chief Executive cannot be conferred upon anyone else; and your committee is constrained to submit for your consideration the question whether this association will suggest a number of names, say three for each vacancy, with the endorsement as to their fitness for the vacancies which will occur upon the Board of Health in July. A discussion of this question is desired by your committee for it will furnish the views and opinions of the representatives of the various county societies.

In the very nature of things the examiners are selected from the profession of medicine, the responsibility for granting a license to practice is therefore thrown wholly upon the medical profession. The members of the Examining Board are responsible to the people for the safe-guarding of their lives and their health and they are responsible to the medical profession for the upholding of the dignity and the advancement of the standard of the medical profession in this state and therefore it seems but a fair deduction to say that part of the responsibility at least for the selection of proper members of the Board should be shared by the medical profession.

The medical profession has ever held in abhorrence the crime of producing abortions at the hands of its members and it has embraced every opportunity to bring to trial and punishment those who could be justly accused of this crime.

Under the laws of this state the commission of this kind of murder is, we are informed, not a felony. Your committee should be instructed to see to it that a proper law making the crime punishable as a felony is enacted by the next legislature.

Another subject upon which legislation is very desirable is one concerning the relationship of physicians to their patients in regard to the time during which suits for damages can be filed. Under the existing laws a physician may be sued at any time during five years after the alleged malpractice occurred; a time entirely too long and fraught with great danger and annoyance to the profession. It seems

to your committee that one year is time sufficient during which such claims for damages should be presented to the proper courts of justice.

We wish also to call your attention to a subject which perhaps it is dangerous to discuss at the present time lest its consideration lead to changes in the present method and law governing the examination of students which would result in securing the enactment of legislation still less satisfactory to the medical profession than the one under which the examinations are now held. It is a most disgraceful fact that the State Board of Health, which is charged with the general supervision of the lives of the people of this state, is upheld by fees collected from young men about to enter upon the practice of their profession. No more narrow conception of public duty and no greater disregard for the lives of the people can be conceived of than to make state supervision over epidemics, endemics and the general care of the sick and infirm residents of Missouri depend upon the number of young men who wish to practice medicine, whose examination fees defray the expenses of the State Board of Health.

If a Board of Health is of value to this state then the state should pay for its maintenance. If not, then let those who wish to abolish the Board take the full responsibility of doing it.

The fee of \$15.00 may not be too large to defray the expenses of the examination but the money received from this source should not be expended in looking after the health of the people.

In order that this and other changes may be made, it is necessary that the influence of the organized profession be felt in the selection and election of candidates for the legislature in the various counties. So soon as this association takes proper action the committee to be appointed by each county society on legislation should be placed in touch with the committee on legislation of this association with a view to systematically canvassing the state.



F. J. LUTZ,  
W. S. ALLEE.  
H. E. PEARSE.

## REPORT OF COMMITTEE ON MEDICAL EDUCATION.

BY WOODSON MOSS, M. D., COLUMBIA, MO.

The medical profession of our state and nation are to be congratulated upon the progress of medical education. We are a long ways from the goal of what we should be, but we are making rapid progress.

One of the most encouraging moves that has been made of recent years is the formation of the National Council of Medical Education.

A tree is known by its fruit; a good tree will bring forth good fruit. The American Medical Association is the tree. This Council on Medical Education is one of its branches. What will be some of the fruit we expect from this branch? It will be uniformity in entrance requirements, or preparation for the study of medicine; uniformity of curriculum in medical colleges; uniformity of practice acts in the various states with reciprocity throughout the states of the Union. There has come up a great cry for reciprocity; but reciprocity must follow; for it cannot come before uniform entrance requirements, uniform curriculum and uniform practice acts. What is this Council? And what are its powers to bring about these results?

The chief object for the organization of the Council on Medical Education of the American Medical Association was "to advance the standard of medical education in the United States." It supplies the long-needed national center wherein may be collected from all sources information regarding medical colleges, students and graduates, medical standards, laws regulating medical practice, results of state board examinations and any other items bearing on medical education. This information will be arranged in such form as to make it most serviceable and disseminated to all parties interested. Such that is of general interest will be published. The Council earnestly desires to co-operate with and further the work of any organization now in the field having as its object the advancement of medical education. The Council, after conferences with representatives of state examining boards, government medical services, medical college associations and colleges of liberal arts, decided on a certain minimum standard.

#### STANDARD OF REQUIREMENTS.

The standard requirements now recommended prerequisite to the practice of medicine consist of five cardinal points as follows:

1. Preliminary requirements to be a high-school education, or its equivalent, such as would admit the student to one of our recognized universities.
2. Preliminary requirements to be passed upon by a state official, such as the superintendent of public instruction, and not by any one connected with the medical college.
3. A medical training in a medical college having four years of not less than 30 weeks each year, of 30 hours per week of actual work.
4. Graduation from an approved medical college required to entitle the candidate to an examination before a state examining board.
5. The passing of a satisfactory examination before a state examining board.

#### REASONS FOR THE FIVE POINTS.

These five fundamental points should be embodied in the law or adopted as a Board regulation in every state whether that state has any medical college or not, since, first they will provide that only properly trained graduates may locate in the state; second, medical colleges may be incorporated in some states now having none, and third, their adoption will help to establish a uniform minimum standard which would help to make a working scheme for interstate reciprocity a possibility.

Point one establishes the minimum of preliminary requirements, and point two insures its enforcement, since some colleges, if allowed



to pass upon the entrance credentials, might wilfully or through neglect matriculate students having little or no preliminary training.

Point three establishes the minimum time limit during which study of medicine should be pursued, which, however, would not be efficient unless (point 4) the student was graduated, thereby having the approval of his alma mater.

Point five, regarding examinations, bears the same relation to the medical training as point two does to preliminary education. (Circular of National Council on Medical Education).

This is no holiday task that this Council has before it, but one that will tax all of its resources and energies. But let us never weary in well doing, for in due season we shall reap, if we faint not.

For the convenience of discussion, and not for any invidious comparison or unfairness, we will divide those engaged in medical education into two classes. First, those connected with what is known as the Stock Company Medical Colleges; second, those connected with the Medical Departments of State Universities and endowed Universities and Colleges.

It is said that every question can be reduced to one of finance. A full consideration of this subject will convince us that this is a financial question of considerable magnitude. Twenty or twenty-five years ago, the first division—(stock company medical colleges)—were doing perhaps three-fourths or four-fifths of the medical education, and scarcely a year passed without one or more of them being born in many of the large cities. These institutions returned a handsome dividend upon the money, time and talent invested in them. There was a demand for them or they would never have existed. There was a time when they seemed to fill and meet all the demands of medical education. We remember some of them with great pride and affection. In their faculties there were men in whom nature had set her every seal to give the world assurance of men. They presented themselves living sacrifices for the good of their race and the advancement and upbuilding of our profession. And, if we could write their names in the Hall of Fame, we would write them above the names of all other men. That the stock company medical school is passing away and will soon become a thing of yesterday, is apparent to the most casual observer. How many years has it been since one of these stock company colleges has been launched in Missouri? Not a few years, I dare say. And I venture the assertion that you will never see another one launched in this state. Call the roll of regular medical colleges that were in Missouri fifteen years ago and how many can answer? Only a few. Call the roll in ten years from now and how many regular medical colleges that are in Missouri today will answer to the call? I venture to say there will not be more than three; and these will be medical departments of universities. What has caused this decay and dissolution among these colleges? It certainly is not due to a lack of good men as teachers, or lack of clinical material for they have had these



in abundance. The cause is a financial one. These schools have not only ceased to pay dividends in cash, but have actually become financial burdens and are so crippled in their equipments that they are unable to meet the demands of modern medical education. Modern medical education is a stupendous financial question and is fast getting beyond the reach of the stock company medical college. If it is a fact that these colleges are going out of business, then medical education must be had through the endowed colleges and state universities. What will be the situation in Missouri when this shall come to pass? Is there a medical school in this state, which has a surety of endowment sufficient to offer to the youth of Missouri a curriculum equal to that required by a first class modern medical school? I think there is but one. And if there be a claim for more, this Association certainly has no voice of authority in its management or control. In this crisis to whom shall we turn? For we must meet this crisis if we are to acquit ourselves like men who love the glory of Missouri above the glory of any other state in the Union. We as a state organization can but turn to our State University. This institution is rapidly taking its place among the great universities of this country. Today, she stands without a peer west of the Mississippi Valley. She is anchored with all of her departments in your State Constitution. In the adoption of the Constitution, the people of the state are pledged to support her; and right nobly are they doing it. The University is the recognized head of the common school system of the state, all of its professional schools, but one, taking rank with the best in the land. Its Law Department stands at the head of the legal profession of this State. The Agricultural Department is recognized for its merit in every state in the Union. Its Schools of Engineering are so widely and favorably known that the graduates are sought for long before they receive their diplomas. So it is of the School of Pedagogy; and so it will be of its School of Journalism. How about the Medical Department? Alas! Must we, the medical profession of Missouri be the only ones to fail to lift our faces with pride when the glories of our loved Institution stand and challenge all for competition? I know the profession too well to think for a moment that you would stand for this. The highest seat in the synagogue is yours if you will only take it.

Let us briefly inspect this department and see wherein it is lacking. First, inspect its entrance requirements. On and after September, 1906, to enter the medical department, a student must have one year, or its equivalent in the Academic Department of the University; to enter the University, he must be a graduate of an approved high school. A committee composed of members from the academic faculty pass upon his credentials. No member of the medical faculty has any connection or voice in the decision of the committee. This requirement will stand unchallenged by any practice act in any state in the Union, and more than meets the requirements of the National Coun-

cil on medical education. It is the purpose of the Board of Curators to gradually raise this standard until it shall equal the standard of the best schools of the land. They point to their record in standard raising as a pledge that they will do this. The first and second years are modeled and equipped after the most approved and advanced schools. To describe the buildings, laboratories, equipments and faculty, is not necessary and would take too much of your time. I do not believe that anyone doubts but what they are all that they claim to be. The immense cost of these two years has been the undoing of the old stock company medical schools. What of the third and fourth years; or, what we might call the Clinical years? Here is the rub that shall cause our undoing unless remedied. Up to the present, we have met the demands fairly well; but the tidal wave of progress has caught us and carried us out beyond our depth; and unless help shall come, we too, must perish. And unless this Association representing the medical profession of this state shall take hold of this department, in my judgment, it must in a few more years go down in the wreck with the stock medical colleges and Missouri lose her golden opportunity. The University and all its departments belong to all the people of the state; but I believe the people of the state would not only be willing, but are looking to the medical profession to shape the course and destiny of the medical department. I would suggest therefore, that this Association recommend or request that the Board of Curators of the Missouri State University take the necessary steps for the establishment of the clinical courses of the third and fourth years of the medical course, in one of the great cities of Missouri.

The establishment of the third and fourth years in a city would, in my judgment, make the conditions for medical education all that could be asked for. I do not believe the Board of Curators would ever consider for a moment the closing of the first two years at Columbia and establishing them in a city. They can be maintained just as well at Columbia and with half the cost. On the other hand, the clinical courses can be maintained in a city at much less cost than at Columbia. There will be held in St. Louis, in a few days, a consultation between representatives of the Board of Curators and representatives of the Board of Managers of a handsomely endowed hospital to be erected in St. Louis in the near future; and out of this consultation may come the establishment, by these two bodies, of a postgraduate school in St. Louis which shall be an honor to the state and a blessing to its people. Missouri is surrounded by states that would gladly give thousands for Missouri's free opportunity. In politics the Missouri idea and the Missouri way are sweeping the country. Now is our opportunity to give the Missouri ideas in up-to-date, clean, solid medical education.

Members of the Missouri State Medical Association, if you want a first-class undergraduate and postgraduate school in Missouri, say so.

I believe the Board of Curators are ready and anxious to do their part. I believe they would gladly listen to your council. This is your school and you have a right to speak out. There is a tide in the affairs of institutions as well as in the affairs of men, which, if taken at the flood, leads on to fortune. We should weigh this matter well, for we are building for future generations, and should lay our foundations broad and deep; for we are invited to build upon the Rock of the Constitution of our great State. I appeal to your State pride; I appeal to you in behalf of the youth of Missouri; and last but not least, in behalf of the great army of country physicians of Missouri who would rejoice at the opportunity of a postgraduate school at their very door, easily reached by their limited time and means.

Let this Association engage in this kind of work and we will have less trouble in keeping up a united and well organized profession.

#### REPORT OF PUBLICATION COMMITTEE.

Since the last annual meeting about 2,500 copies of the JOURNAL have been printed each month and distributed to the members of the association, medical libraries, advertisers, and non-members. The JOURNAL has published not only the transactions of the State Medical Association, but papers or abstracts of papers from many of the affiliated societies, a total of 890 reading pages. Altogether there have been published 82 original articles, 81 editorials and abstracts, 215 county society notes, and the tables showing officers and date of meetings of all affiliated societies. The cost of publishing the transactions in the JOURNAL form during 1904-05 was \$1,681.56; the cost of publishing the JOURNAL during 1905-06 \$2,003.69. During the past year your committee has held five meetings. As a result of these meetings one advertisement was refused and seven were discontinued. All advertisements where the formula was not given were ordered dropped as soon as contracts expire. The following furnished formula on request: Uriseptin, Colden's Liquid Beef Tonic. Hydroleine, Sal-Hepatica, Tyree's Powder, Lactopeptine, Liquid Peptonoids, Glycothymoline, Eusoma, Glyco-Heroin, Cystogen, Dioviurnia, Neurosine, Germiletum, Cypridol, Morrhuol-Creosote, Salacetin.

The Committee decided to follow as nearly as possible the requirements of the *Journal of the American Medical Association*.

An important question to be considered at this meeting is the publication of the JOURNAL after June, 1907, at which time the contract existing between the association and the Medical Press Company expires. A JOURNAL of not less than 80 pages of reading matter should appear and will probably be managed in one of three ways: First the Association publishing the JOURNAL, depending on an advertising agency for advertisements, paying commissions on those received; or second continuing the present arrangement at a lessened cost; or third publishing the JOURNAL without advertisements.

The cost of the first would depend upon the number of advertise-



ments received. The cost of the second would be \$1500 per year for three years and no cost after that time. The cost of the third would be approximately \$1800 per year.

Respectfully submitted,

C. M. NICHOLSON, Chairman.

### REPORT OF THE SECRETARY.

I have the honor of making the following report for the year just ended. In accordance with the instructions of this body I had printed 2000 copies of the Constitution and By-laws which was also printed in the JOURNAL.

During the year the card index has been added to materially and at this time contains the names of 6,050 physicians of the state with about 1,928 auto-biographies of members of the Association. Immediately following the last annual meeting a list of the members of the various affiliated societies was forwarded to the secretaries requesting correction and the corrected list furnished to the publication committee for the July issue of the JOURNAL. A number of letters have been written to physicians of unorganized counties also to delinquent members of the organized counties. Packages containing the constitution and by-laws with blanks for permanent record, applications for membership, and blank applications for charter have been sent to secretaries of prospective societies.

The work of the State secretary has been increased by the rule of the American Medical Association requiring a monthly report showing names and addresses of new members, also changes in membership of county societies. Altogether 3,075 letters have been written from the secretary's office, press copies of each having been made and are here for the inspection for the House of Delegates and Judicial Council. The secretary has received the following amounts for dues for 1906-07 same having been forwarded to the Treasurer whose receipts are now on file:

Adair, \$16; Andrew, \$8; Atchison, \$28; Audrain, \$34; Barton, \$32; Bates \$30; Benton \$24; Boone, \$40; Buchanan, \$136; Butler, \$20; Caldwell, \$48; Callaway, \$32; Camden, \$18; Cape Girardeau, \$46; Carroll, \$20; Carter-Shannon, \$12; Cass, \$52; Chariton, \$44; Clark, \$14; Clay, \$52; Cole, \$30; Cooper, \$38; Daivess, \$16; Dent, \$20; Franklin, \$42; Gasconade-Maries-Osage, \$26; Greene, \$58; Grundy, \$36; Harrison, \$36; Henry \$40; Holt \$40; Howard, \$28; Howell, \$32; Jackson, \$530; Jasper, \$52; Jefferson, \$20; Johnson, \$42; Knox, \$20; Laclede, \$22; Lafayette, \$40; Lincoln, \$12; Linn, \$54; Livingston, \$42; Macon, \$54; Madison, \$20; Marion, \$44; Mercer, \$10; Miller, \$22; Mississippi, \$12; Moniteau, \$34; Morgan, \$16; Monroe, \$34; Newton, \$38; New Madrid, \$16; Nodaway, \$70; Pemiscot, \$16; Pettis, \$78; Phelps, \$20; Platte, \$38; Putnam, \$14; Ralls, \$24; Randolph, \$18; Ray, \$24; Ripley, \$8; Saline, \$20; St. Charles, \$26; St. Clair, \$16; Ste. Genevieve, \$20; St. Louis County, \$40; St. Louis City, \$902; Schuyler, \$12; Scotland, \$20; Shelby, \$30; Stoddard, \$24; Sullivan,



\$16; Vernon, \$28; Worth, \$22; Lawrence, \$38; Cedar, \$22; Gentry, \$14; Scott, \$18; St. Francois, \$16; Total \$3876.00.

Notwithstanding the amount has been received as a rule in small checks, post office orders and currency during a period of several months, so far as is known absolutely no error has thus far occurred; each society having been receipted by me for all payments and the treasurer's receipt for the entire amount, is on file in the secretary's office.

Arrangements have been made with the Southwestern Passenger Association and the Western Passenger Association for a rate of 1 1-3 fare for the round trip from all parts of the state to Jefferson City on account of the annual meeting. I believe we may confidently expect a rate of one fare for the round trip for the annual meeting 1907.

About the 15th of April return postal cards were sent to all societies in affiliation and the replies enable me to present the following table; showing names of societies in each district, numbers of meetings held, scientific papers read, members 1905-1906:

Name of Society.	Number of Meetings Held.	Scientific Papers Read.	Members 1905.	Members 1906.	Gain.	Loss.	Name of Society.	Number of Meetings Held.	Scientific Papers Read.	Members 1905.	Members 1906.	Gain.	Loss.
Clark .....	2	0	10	7	0	3	a Iron .....	..	..	..	..	..	..
Scotland .....	5	0	10	10	0	0	Perry .....	6	0	11	0	0	11
Adair .....	4	10	10	8	0	2	c St. Francois .....	..	..	..	..	..	..
Knox .....	6	12	5	10	2	0	Mississippi .....	4	4	11	6	0	5
Schuyler .....	2	3	9	6	0	3	New Madrid .....	1	0	8	8	0	0
Linn .....	4	12	25	27	2	0	Wayne .....	6	1	9	0	0	9
Carroll .....	1	1	8	10	2	0	Stoddard .....	4	12	11	12	0	10
Chariton .....	98	51	20	22	2	0	a Dunklin .....	..	..	..	..	..	..
Livingston .....	5	11	29	21	0	8	Butler .....	12	3	13	10	0	3
Grundy .....	6	2	14	18	4	0	a Ripley .....	..	..	4	4	0	0
Sullivan .....	1	0	7	8	1	0	Carter-Shannon .....	4	15	10	6	0	4
Mercer .....	4	0	5	5	0	0	Pemiscot .....	4	10	11	8	0	3
Putnam .....	5	0	15	7	0	8	Madison .....	20	15	10	10	0	0
Clay .....	10	24	25	26	1	0	Cape Girardeau .....	11	15	17	23	6	0
Ray .....	5	4	11	12	1	0	c Scott .....	..	..	..	9	..	..
Platte .....	7	12	16	19	3	0	Miller .....	3	6	13	11	0	2
Clinton .....	8	7	9	9	0	0	a Morgan .....	..	..	9	8	0	1
Caldwell .....	4	10	21	24	3	0	Moniteau .....	4	7	17	17	0	0
Gentry .....	3	3	0	7	7	0	Cole .....	4	0	17	15	0	2
Harrison .....	3	4	13	18	5	0	Camden .....	0	0	9	9	0	0
Worth .....	6	5	11	11	0	0	Gasconade-Maries- Osage .....	2	4	6	13	7	0
Davies .....	3	5	13	8	0	5	Pettis .....	20	20	37	39	2	0
Buchanan .....	20	28	72	68	0	4	Lafayette .....	5	7	16	20	4	0
Holt .....	4	8	16	20	4	0	Henry .....	3	4	18	20	2	0
Atchison .....	1	2	16	14	0	2	St. Clair .....	4	10	10	8	0	2
Nodaway .....	7	9	30	35	5	0	Benton .....	4	6	16	12	0	4
Andrew .....	4	3	20	4	0	16	Saline .....	0	0	9	10	1	0
Shelby .....	4	3	12	15	3	0	Cooper .....	10	2	20	19	0	2
Marion .....	9	9	17	22	5	0	Cass .....	7	10	29	26	0	3
Macon .....	12	15	31	27	0	4	Jackson .....	17	25	229	265	36	0
Monroe .....	2	0	19	17	0	2	Bates .....	6	6	15	15	0	0
Ralls .....	3	8	16	12	0	4	Johnson .....	4	10	23	21	0	2
Randolph .....	..	..	14	9	0	5	Newton .....	12	20	23	19	0	4
Audrain .....	3	2	18	17	0	1	d McDonald .....	..	..	..	..	..	..
Callaway .....	5	5	19	16	0	3	Jasper .....	16	4	25	26	1	0
a Warren .....	..	..	..	..	..	..	Barton .....	3	5	8	16	8	0
b Montgomery .....	..	..	..	..	..	..	Cedar .....	..	..	0	11	11	0
Boone .....	2	2	26	20	0	6	Vernon .....	4	4	23	14	1	9
Howard .....	5	2	17	14	0	3	Phelps .....	4	4	8	10	2	0
St. Charles .....	3	10	11	13	2	0	Pulaski .....	4	8	11	0	0	11
St. Louis .....	10	10	27	20	0	7	Laclede .....	4	8	11	11	0	0
Lincoln .....	0	5	12	6	0	6	c Dent .....	..	..	..	..	..	..
Franklin .....	4	7	20	21	1	0	a Crawford .....	..	..	..	..	..	..
Jefferson .....	7	4	22	10	12	0	Greene .....	28	8	28	29	1	0
d Washington .....	..	..	8	0	0	8	c Lawrence .....	..	..	..	..	..	..
Ste. Genevieve .....	1	0	10	10	0	0	Howell .....	6	7	13	16	3	0
a Reynolds .....	..	..	..	..	..	..							

a No report. b Withdrew. c Recently affiliated. d Not heard from.

Especial attention is called to the facts that in 1906-07 there are 109 members of county societies not reported to the State Association. As the constitution requires the secretaries of each affiliated society to forward dues for all members, especial attention of the House of Delegates is called to the foregoing.

During the past 12 months 9 county societies have been organized, with a total membership of 86. One society has withdrawn and nine societies have had no meetings and are practically dead. Number of counties in the state 115, number in affiliation 92; number of societies organized since May, 1905, 8; number of societies doing scientific work, 65; number of societies whose membership has increased, 32; number of societies whose membership has decreased, 38. Total paid membership, 1904, 1,121; total paid membership May 1905, 1,602; total paid membership May 1906, 1,928. Gain 326.

The following is a recapitulation of the work of this office: Number of letters mailed, 3,075; number of packages mailed, 14; number of JOURNALS mailed, 310. The expense of this office has been as follows: Two-cent stamps for mailing 3,075 letters \$61.50; two-cent stamps for mailing charters \$.28; two-cent stamps for mailing JOURNALS, \$6.20; stamps for packages, \$3.20. Total \$71.18.

Respectfully submitted,

C. M. NICHOLSON, Secretary.

## TREASURER'S ACCOUNT WITH THE MISSOURI STATE MEDICAL ASSOCIATION,

1905-1906.

## CASH RECEIVED.

Amount Forwarded .....	\$4116.81
Sub. J. & Extra Journal .....	17.20
Int. on Daily bal. to 1-1 06 .....	40.95
Int. on Daily bal. to 5-16 06 .....	21.41
Audrain County .....	34.00
Adair County .....	22.00
Andrew County .....	14.00
Atchison County .....	28.00
Buchanan County .....	148.00
Boone County .....	42.00
Bates County .....	30.00
Benton County .....	52.00
Barton County .....	32.00
Butler County .....	22.00
Callaway County .....	32.00
Clay County .....	106.00
Carroll County .....	36.00
Clinton County .....	2.00
Cass County .....	62.00
Carter-Shannon County .....	24.00
Cooper County .....	42.00
Cape-Girardeau County .....	50.00
Cedar County .....	22.00
Charitan County .....	44.00
Camden County .....	18.00
Clark County .....	14.00
Cole County .....	30.00
Caldwell County .....	48.00
Daviess County .....	16.00
Dent County .....	20.00
Dunklin County .....	2.00
Franklin County .....	58.00
Gasconade-Maries-Osage .....	26.00
Greene County .....	118.00
Grundy County .....	38.00
Gentry County .....	14.00
Henry County .....	42.00
Howell County .....	34.00
Harrison County .....	38.00
Howard County .....	30.00
Holt County .....	40.00
Jasper County .....	68.00
Johnson County .....	44.00
Jackson County .....	578.00
Jefferson County .....	22.00
Knox County .....	20.00
Lincoln County .....	20.00
Livingston County .....	46.00
Lawrence County .....	38.00
Laclede County .....	22.00
Linn County .....	54.00
LaFayette County .....	40.00
Macon County .....	68.00
Moniteau County .....	68.00
Montgomery County .....	2.00
Morgan County .....	16.00
Madison County .....	20.00
Mississippi County .....	12.00
Marion County .....	44.00
Monroe County .....	34.00
Miller County .....	22.00
Mercer County .....	10.00
Nodaway County .....	130.00
Newton County .....	40.00
New Madrid County .....	16.00
Pemiscot County .....	16.00
Pulaski County .....	22.00
Pettis County .....	82.00
Platt County .....	38.00
Phelps County .....	20.00
Putnam County .....	14.00
Reynolds County .....	16.00
Randolph County .....	20.00
Ripley County .....	8.00
Ralls County .....	24.00
Ray County .....	24.00
Saline County .....	28.00
St. Louis County .....	50.00
St. Louis, M. S. .....	1092.00
Schuyler County .....	16.00
Stoddard County .....	36.00
St. Genevieve County .....	20.00
Scotland County .....	20.00
St. Charles County .....	26.00
Shelby County .....	30.00
Sullivan County .....	16.00

St. Clair County .....	16.00
Scott County .....	18.00
Vernon County .....	36.00
Worth County .....	22.00
Wayne County .....	18.00
Washington County .....	6.00
St. Francis County .....	16.00

\$8810.37

## DISBURSEMENTS.

May	18 Dr. Nicholson Stamps .....	\$189.60
"	18 Dr. Nicholson, Salary .....	75.00
"	18 Dr. Brummall, T. Exp. ....	18.30
"	18 Dr. Nicholson Teleg. ....	1.24
"	18 Dr. Dallas, Trav. Exp. ....	15.95
"	18 Dr. Johnson, Trav. Exp. ....	5.00
"	18 Dr. Dorsett, Trav. Exp. ....	7.85
"	18 Dr. Hair, Trav. Exp. ....	20.50
"	18 Dr. Snyder, Trav. Exp. ....	5.85
"	18 Miss Robinson, Stenog. ....	300.00
"	18 Miss Strong, Stenog. ....	30.00
"	18 Dr. Welch, E. P. S. 1904-5 ..	65.00
"	18 I. M. J. Co., Pt. J. (May) ..	169.15
June	10 N. S. Co., Treas. Bond. ....	25.00
"	21 Dr. Goodwin, St. 5-18 6-18 ..	50.00
"	22 H. F. Co., R. T. Desk. ....	38.60
"	24 I. M. J. Co., Pt. J. (June) ..	155.70
"	29 M. Pt. Co., L. H. Sec'y. ....	3.75
"	29 M. Pt. Co., L. H. C. J. C. ....	2.00
"	29 M. Pt. Co., Pt. for Sec'y. ....	11.50
"	29 M. Pt. Co., Pt. ....	5.50
"	29 M. Pt. Co., Pt. Books Treas. ..	19.50
July	18 S. S. Co., Letter B. ....	2.00
"	18 Miss Strong, Stenog. ....	67.00
"	26 I. M. J. Co., Pt. J. (July) ..	277.20
Aug.	5 Dr. Goodwin, S. 6-18 7-18 ..	50.00
"	5 Dr. Overholser, T. Exp. ....	15.00
"	5 Dr. Miller, Trav. Exp. ....	26.60
"	12 S. S. Co., Pt. ....	2.00
"	18 Miss Strong, R. M. S. M. A. ..	70.00
"	18 I. M. J. Co., Pt. (Aug.) J. ....	150.45
"	18 Dr. Goodwin, S. 7-18 ..	50.00
"	29 Dr. Nicholson, Salary .....	75.00
Sept.	14 A. M. A., Pt. Const. By. ....	2.00
"	22 Dr. Stall, Exp. Const. ....	1.30
"	22 Dr. Goodwin, S. 8-18 9-18 ..	50.00
"	22 A. M. A., Pt. Records. ....	2.15
"	25 M. Pt. Co., E. J. G. ....	2.00
Oct.	16 I. M. J. Co., Pt. J. (Sept.) ..	142.83
"	16 I. M. J. Co., Pt. J. (Oct.) ..	152.36
"	16 M. Press Co., Pt. C. & B. ....	49.47
"	23 S. S. Co. ....	2.20
"	16 Dr. Goodwin, S. 10-18 ..	50.00
Nov.	8 M. Pt. Co., L. H. E. J. G. ....	3.90
"	16 M. Pt. Co., L. H. C. M. N. ....	2.40
Dec.	16 I. M. J. Co., Pt. J. (Nov.) ..	152.10
"	16 Dr. Goodwin, S. 10-18 11-18 ..	50.00
"	16 Dr. Norwine, Trv. Exp. ....	154.75
"	21 Dr. Nicholson, Salary .....	100.00

1906.

Jan.	15 Miss Strong, Stenog. ....	60.00
"	15 I. M. J. Co., Pt. J. (Dec.) ..	197.10
"	25 I. M. J. Co., Pt. J. (Jan.) ..	179.60
"	25 M. Pt., L. H. ....	3.85
"	29 M. Pt., L. H. ....	3.60
Feb.	6 Dr. Goodwin, Stenog S. ....	50.10
"	14 Dr. Pritchett, O. P. ....	11.00
"	20 B. S. Co., R. Stamp. ....	.95
"	24 I. M. J. Co., Pt. J. (Feb.) ..	156.50
"	24 Dr. Goodwin, 1-18 2-18 ..	50.00
March	8 S. S. Co., Copy Book. ....	2.50
"	10 I. M. J. Co., Pt. J. (March) ..	222.50
"	30 Dr. Nicholson, Salary .....	75.00
Apr.	11 M. Pt. Co., St. Sec'y. ....	12.00
"	11 Miss Strong, Stenog. S. ....	87.50
"	11 Dr. Goodwin, S. 2-18 3-18 ..	50.00
"	22 Dr. Goodwin, S. 3-18 4-18 ..	50.00
"	22 I. M. J. Co., Slips Gum. ....	2.45
"	22 I. M. J. Pt. J. (Apr.) ....	196.90

\$4329.25

Cash on hand.....\$4481.12

\$8810.37

J. FRANKLIN WELCH,  
Treasurer.



## BOOK REVIEWS.

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A Compend of Obstetrics, Especially Adapted to the use of Medical Students and Physicians, by Henry G. Landis, A. M., M. D., late Professor of Obstetrics and Diseases of Women in Starling Medical College. Revised and Edited by William H. Wells, M. D., Demonstrator of Clinical Obstetrics in the Jefferson Medical College, Philadelphia; Gynaecologist to the Mount Sinai Hospital, Philadelphia; Late Adjunct Professor of Obstetrics and Diseases of Infancy in the Philadelphia Polyclinic, etc. Eighth Edition. Illustrated. P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia. 1906.

The design of this book is to furnish a useful compend and Quiz-book for the student and by a system of questions bringing out the more important facts in obstetrics. This new edition has been carefully revised bringing the subject matter fully up to date.

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Proceedings of the Connecticut Medical Society, 1905. One Hundred and Thirteenth Annual Convention. Published by the Society. Press of the Farmer Pub. Co., Bridgeport, Conn.

The following are some of the papers read and reported at this Annual Convention: . President's Address, Resume of the Development and Present Status of Gastric Surgery. The Use of Laboratory Aids in Diagnosis, C. J. Bartlett, New Haven. The Prevention of Venereal Diseases, R. A. McDonnell, New Haven. Prophylaxis in Tuberculosis, C. D. Alton, Hartford. Concerning Some of the Newer Non-Surgical Forms of Treatment of Abnormal Conditions of the Female Pelvic Organs, Kate C. Mead, Middletown. The Bossi Dilator for Rapid Dilation of the Cervix, O. G. Ramsey, New Haven. Pregnancy in the Congenital Malformation of the Uterus, C. E. Taft, Hartford. Infant Feeding with Cow's Milk, H. Merriman Steele, New Haven. Contribution to the Study of Dysentery, A. R. Diefendorf and J. W. Fisher, Middletown. The Treatment of Malignant Diseases, Including a Report of Over One Hundred Cases Cured by Surgical Operation. F. S. Dennis, Norfolk. Radical Operation for Mammary Carcinoma, W. F. Verdi, New Haven. Surgical Aspects of Ulcer of the Stomach, H. M. Lee, New London. Diagnosis in Carcinoma of the Stomach, F. F. McIntosh, New Haven. Diagnosis of Surgical Diseases of the Kidney and Ureter, O. C. Smith, Hartford. Treatment in Tuberculosis Joint Diseases, J. E. Root, Harvard. The Faucial Tonsil, F. S. Crossfield, Hartford. Some Remarks on Adenoid Hypertrophy Occurring in Children, E. Terry Smith, Hartford. The Diagnosis and Treatment of Pronated Feet, A. H. Williams, Hartford, Connecticut.



Transactions of the Indiana State Medical Association, held in West Baden, Ind., June 7, 8 and 9, 1905. Wm. B. Burford, Printer and Binder, Indianapolis.

A very able and instructive program is reported. Thirty-four papers, covering almost every field in medicine, were read. The following is the program in part as given: President's Address; Progressive Medicine, Pres. Geo. T. McCoy, Columbus. Sunshine and Shadow in Medical Endeavor, Jos Bryant, New York City. The Prevention of Post-Operative Paresis and Adhesions of the Intestines, L. P. Luckett, Terre Haute. Mesenteric Cysts, O. G. Pfaff, Indianapolis. Institutional Practice, Harry Sharpe, Jeffersonville. Surgery of the Stomach, H. O. Pantzer, Indianapolis. The Etiology and Pathology of Rheumatism, W. H. Patton, Orleans. Sciatict, John Little Morris, Columbus. Membranous Catarrh of the Intestines, Robt. Hessler, Logansport. Electrical Treatment of Malignant Growths, J. P. Hetherington, Logansport. The Accessory Sinuses of the Skull, with a Brief Reference to Diseases of the Same, John Johnson Kyle, Indianapolis. Footwear and its Influence on Flat-Foot, E. D. Clark, Indianapolis. Acute Diffuse Suppurative Peritonitis, S. J. Young, Valparaiso. Malignant Peritonitis, Etta Charles, Summitville. Cancer of the Larynx, with report of Case, L. F. Page, Indianapolis. Gonorrhoea in Women, A. S. Sager, Indianapolis. The Eyesight of School Children and their Functional Reflexes Due to Eyestrain, Walter N. Sharpe, Indianapolis. Headache as a Symptom, J. F. Hicks, Arcadia. The Essentials of Treatment of Acute Inflammation of the Middle Ear, Albert E. Bulson, Jr., Ft. Wayne. The Care of the Insane at Home, Jennie Jenkins, Richmond. Cholecystitis, Chas. J. Cook, Indianapolis. The Tonsils, or a Plea for Tonsillectomy, David W. Stevenson, Richmond. The Rational Treatment of Hernia, Jos. Rilus Eastman, Indianapolis. Fractures of the Patella, J. H. Ford, Indianapolis. The Diagnosis of Gall-stone Diseases, M. A. Austin, Anderson. Gall-bladder Surgery, T. C. Kennedy, Shelbyville. Lumbar Exploratory Puncture, J. A. McDonald. Symptoms Indicating Immediate Operative Procedure in Brain Injuries, D. C. Peyton, Jefferson. The Erythema Group of Skin Diseases and their Visceral Lesions, A. W. Brayton, Indianapolis.

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Baby Incubators. A Clinical Study of the Premature Infant, with Especial Reference to Incubator Institutions Conducted for Show Purposes. By John Zahorsky, A. B., M. D., Clinical Professor of Pediatrics, Medical Department Washington University, St. Louis. Courier of Medicine Company, 1905.

This volume is the result of a series of articles on the author's personal experience with premature infants in an institution for this purpose at the Louisiana Purchase Exposition.

While this work is based on institutional work as conducted on the "Pike," the questions discussed will apply to the rearing of premature infants anywhere. The apparatus, food, feeding, etc., are fully discussed. The "history" of each infant in this institute also gives much valuable information. This little volume is an interesting addition to the literature on the subject.

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The Ophthalmoscope and How to Use It. With Colored illustrations, descriptions, and treatment of the principal diseases of the fundus. By James Thorington, A. M., M. D.; Author of "Refraction and How to Refract" (Third Edition) and "Retinoscopy" (Fourth Edition); Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine. 73 Illustrations—12 Colored Plates. P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia. 1906.

In the preparation of this work the author has followed a systematic and practical plan beginning with the consideration of the ophthalmoscope and its optic principles. The optic principles and anatomy of the eye are also given due consideration. Then a comparison of the normal with the pathologic eye is made so that the examiner will know if the picture is that of the normal or pathologic eye, and what structures if any are involved. The colored plates will greatly aid in differentiating disease. In the treatment of the various diseases the author has made no attempt to exhaust the subject, yet it has been sufficiently dilated on to give the reader a proper working knowledge of the same. This volume is a valuable aid to the student and practitioner who desires a working knowledge of the ophthalmoscope with the proper interpretation of its findings but has not the time to study the large text book on the eye in which the subject is often too deeply imbedded for immediate comprehension.

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The Surgical Pathology and Treatment of Diseases of the Ear. By Clarence John Blake, M. D. Professor of Otology, Harvard University, and Henry O. Reik, M. D. Associate in Ophthalmology and Otology, Johns Hopkins University. Cloth, \$3.50 net. Publishers, D. Appleton & Co., New York.

Essentially a surgical treatise, with a view to practical utility, structural descriptions in this volume are limited to those of surgical importance; pathological conditions are emphasized, and the details of surgical procedures are confined to those acceptedly applicable to the conditions presented. The book is well illustrated, mostly from original drawings. Coming as it does from such eminent authorities, this book should be well received not only by the specialist, but also by the general practitioner who so often is called upon to treat diseases of the ear.

The World's Anatomists. Concise Biographies of Anatomic Masters, From 300 B. C. to the present time, Whose names have adorned the Literature of the Medical Profession. By G. W. H. Kemper, M. D., Professor of the History of Medicine in the Medical College of Indiana, Indianapolis, Ind. Revised and Enlarged from the original serial publication in *The Medical Book News*; with eleven illustrations, nine of which are portraits. P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia. 1905.

The object of this little volume is to give the student in medicine a concise biographic sketch of those men who have made the literature of anatomy. A closer knowledge of lives of the men whose names are given to the various parts of the body makes the study of anatomy more interesting. This work gives a brief sketch of the anatomic masters who lived three hundred years before the birth of Christ as well as those of the present hour. Almost every country in the world is represented. This work contains a brief history of two hundred and twenty-nine anatomists. Also the names of sixteen authors of works on anatomy have been appended and a number of illustrations have been incorporated. This little volume will be a valuable aid to students and practitioners of medicine.

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Consumption and Civilization by John Bessner Huber, A. M., M.D., J. B. Lippincott Co., Phila. \$3.00.

This volume is of vital interest by reason of its broad economic, sociologic, legislative and humanitarian scope as well as its practical character. The author presents a comprehensive explanation of the effect which consumption has had upon civilization and a consideration of its relation to human affairs. The essay is addressed to both physicians and laymen and thus a common standing-ground is given from which, side by side, both classes can direct their efforts to resist and eventually overcome this curse of civilization—the "white plague."

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Transactions of the American Roentgen Ray Society. 1905.

This volume of 125 pages presents the twenty papers read before the American Roentgen Ray Society at its sixth annual meeting held at the John Hopkins Hospital in September, 1905. Of much interest are those papers which prove the value of x-ray photography in the study of the embryologic development and anatomic relation of internal organs. The larger number of the papers are devoted to the consideration of the diagnostic and therapeutic application of the Roentgen rays.

## EARLY FORTHCOMING BOOKS.

The Organization, Construction and Management of Hospitals.  
By Albert J. Ochsner, B. S., F. R. M. S., M. D. Chicago. Cleveland  
Press, Publishers.

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The Technique of Modern Operations for Hernia. By Alexander  
Hugh Ferguson, M. B., C. M., F. R. M. S. Chicago. Cleveland  
Press, Publishers.

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A Practical Guidebook on Everyday Surgery and Surgical Hand-  
icraft. By A. Hamilton Levings, M. D. Chicago. Cleveland Press,  
Publishers.

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Practical Dermatology. A Condensed Manual of Diseases of the  
Skin; Designed for the Use of Students and Practitioners of Medi-  
cine. By Bernard Wolff, M. D. Chicago. Cleveland Press, Pub-  
lishers.



# JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

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## ORIGINAL ARTICLES

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### THE ANTERIOR VAGINAL COELIOTOMY INCISION.\*

BY O. BEVERLY CAMPBELL, M. D., ST. JOSEPH, MO.

In considering the applicability of the anterior vaginal coeliotomy incision, I presume that I am probably addressing surgeons who from training and practice are more familiar with the abdominal incision. There are those in the practice of surgery who make use of the abdominal incision to the total exclusion of the vaginal, and as well those who make use of the vaginal incision whenever it is possible.

It is the opinion of the writer that the surgeon who fails to recognize the opportunities offered in the selection of the route which offers the greatest advantages, with the least possible danger to life, is indeed handicapped.

The anterior vaginal coeliotomy incision does not offer the possibilities of the abdominal incision, and it should not be compared with it, as its degree of applicability should not be given so wide a range. We however, believe that it rightly claims a place in surgery, though limited in its range of application.

The surgeon who is unfamiliar with it and cannot avail himself of the advantages of so slight a procedure, as regards danger to life and a rapid convalescence, will find it necessary to resort to an abdominal incision for the correction of every slight pathologic lesions or permit such lesions to remain unrelieved.

It should be admitted that any work which can be performed through the anterior vaginal coeliotomy incision, can be performed through the abdominal incision, but the vaginal incision when applicable is not so major a procedure and offers especial advantages in a certain class of cases.

This particular method of operating through the anterior vaginal vault was originated by Dührssen, and was termed by him "anterior colpotomy." There can be no particular objection to the name itself as it implies a cut in the anterior vaginal wall, but the name has

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\*Read at the annual meeting, Jefferson City, May, 1906.

been used to designate the especial technique of Dührssen and of A. Martin in correcting backward displacements by the performance of vaginal fixation, so that as a variety of procedures may be performed through this incision, I prefer to use the name, anterior vaginal coeliotomy.

In displacements of the uterus occurring in women who have borne children it is usual to find associated injury to the pelvic floor. Infection has not been an etiological factor in the production of a fair percentage of such cases, but rather the trauma incident to child-birth.

A physical examination will usually reveal some degree of decensus of the anterior and posterior vaginal wall, a relaxed vaginal outlet with more or less injury to the pelvic floor. The cervix uteri has usually suffered more or less injury and there is often noticed eversion of the cervical mucosa.

It is in this class of cases in which the anterior vaginal coeliotomy incision is most satisfactory giving easy access to the fundus uteri and round ligaments which can be readily shortened.

The technique which the writer practices in the above mentioned class of cases is the following: Curettage of the uterus, trachelorrhaphy when necessary, followed by an elliptical incision in the anterior vaginal vault, as in the performance of anterior colporrhaphy. A dissection is then made between the uterus and bladder and the vesical peritoneum is opened giving access to the pelvis. Through this incision the fundus uteri is seized with a pair of tenaculum forceps and held in the wound.

The round ligament of one side is searched for and drawn out through the wound with a pair of hemostatic forceps and the round ligament of the opposite side is drawn out in the same manner. These ligaments can be attached anteriorly to the fundus, after the Baldey-Webster Method, or the Reis Method of invagination may be used.

The vaginal wound is closed with a continuous suture of chromicized cat-gut, as in the performance of anterior colporrhaphy. A posterior colporrhaphy and perineorrhaphy completes the technique.

The average length of time required for the completion of the above mentioned technique in fifty cases operated upon by the writer was forty-five minutes. The convalescence was short and satisfactory in all of them, and the average length of time in the hospital was twelve days.

Twenty-five of the cases were re-examined at periods of time varying from one to three years following operation, and no recurrences were found.

Five of the women operated upon have borne children since operation with no hindrance to child-birth, and no recurrence of the displacements have followed.

Forty of the cases operated upon were cases of simple retro-displacement occurring in women who had borne one or more children, and in all of them more or less injury to the pelvic floor was found.

In all of them the uterus was of normal size and free from adhesions. In five cases an ovary or part of an ovary was removed, the above mentioned technique being varied by delivering the fundus, ovaries and tubes through the incision. In ten of the fifty cases operated upon there were present adhesions of the cob-web variety, which were easily dealt with through this incision. Ten cases of decensus uteri, varying in degree, were operated upon through the anterior vaginal incision. These cases were in women who had borne children and had reached the menopause. Marked injury to the pelvic floor was observed in all of them. In two of them complete tears of the perineum existed with incontinence of feces. In three of the cases complete procidentia existed, while seven of them might be classed as prolapsus of the second degree, the cervix appearing at the vulva.

In seven cases, trachelorrhaphy, perineorrhaphy, anterior colporrhaphy, and the anterior vaginal coeliotomy incision with vaginal fixation, was the technique followed. These cases have been re-examined at periods of time varying from two to three years with no recurrences. In the three cases of procidentia Wertheim's method of anteverting the uterus and making vaginal fixation was employed with good immediate results. These cases however, are too recent to show permanency of results.

I shall now enumerate the class of cases in which the anterior vaginal coeliotomy incision will prove satisfactory. (1.) Simple retro-displacements of the uterus, especially indicated where plastic work is necessary in the vagina and to the pelvic floor. (2.) In cases of prolapsus of the uterus, however, in some cases of procidentia of long duration in which extensive ulceration of the vaginal mucosa has occurred, hysterectomy and total extirpation of the vagina, would be the most satisfactory procedure. (3.) Small myo-fibromas of the uterus may be removed through this incision, either by myomectomy, or by supra-vaginal amputation of the fundus. (4.) Chronic cases of salpingitis and ovaritis where the adhesions are not too dense may be satisfactorily operated upon through this incision. (5.) Small ovarian cystomas.

The experience of the writer in the use of the anterior vaginal coeliotomy incision is rather extensive, numbering about three hundred and fifty cases. More than one hundred of these cases were operated upon by the writer, while the remainder were mostly seen in the public and private work of Prof. A. Martin, of Germany. From the knowledge gained from such an experience, I am limiting the method to the class of cases above enumerated. It will be ob-



served that the writer has not attempted to define the possibilities of the anterior vaginal coeliotomy incision, but rather to define its limitations in his individual work.

In the class of cases above enumerated, the work can be done as satisfactorily to the operator as through the abdominal incision. The patient is not impressed with the dread of having the abdomen opened, convalescence is shorter and freer of pain. In cases requiring plastic work in the vagina and repair of the pelvic floor, to carry the incision in the anterior vaginal wall a step father and shorten the round ligaments or make vaginal fixation, requires but a few minutes for its accomplishment and does not materially add to the gravity of the procedure.

The writer would insist upon a correct diagnosis of the condition of the pelvic organs, in making a selection of the anterior vaginal coeliotomy incision believing that it should only be employed where it offers equal advantages with the abdominal incision in thoroughness of technique and as well safety to life.

#### DISCUSSION.

Dr. H. E. Pearse, of Kansas City:—This paper shows a great advance in lifting women from the wreck in which child-birth leaves her. Primarily the trouble is with the pelvic floor. The question presented when these cases come to us is as to the best route of entrance, barring cases of infection, as I understand the essayist did. Leaving out the question of gonorrhea and other similar conditions, the procedure was a very valuable one indeed. I have not been a friend of the vaginal incision. I like to go in through the abdomen and see what I am doing. I have helped some of the best operators in Kansas City, repair injuries resulting from the vaginal operation. It seems to me that the abdomen furnishes a method of doing very accurate work. There is not very much statistical information as to the result of these operations. At the same time there can be no doubt as to the value of the procedure which has been described. I approve of the procedure and can only express great regret at my own inability to take advantage of that incision in the way that he seems to do. It seems so much better and safer than to attack it from above. I must congratulate him upon his success and still express myself as unconvinced as to the desirability of using the vagina.

Dr. Walter B. Dorsett, of St. Louis:—I did not bear the introduction to the paper, but I am lead to believe from a remark by Dr. Pearse, that the writer limits the operation, that is, that it should be done within certain limitations, and I would suggest that he change the title and rechristen it and call it "Limitations in the employment of the Anterior Vaginal Celiotomy." I do that for a serious reason, that is that if this paper goes out as it is, unless special stress is laid



on limitations, it will do a great deal of harm. I believe that a great many operations through the vaginal route are done without good results. I believe it is impracticable, because you cannot see what you are doing. When you are entering posteriorly for the purpose of giving relief in these extra-uterine cases you are often lead into disaster. I have seen two women bleed to death from posterior incisions in pregnancy.

What we need is to gain a degree of experience so that we can do these operations rapidly, and then we will be in position to give our patients the benefit of the operation which will afford the greatest relief and without undue risk. Where you have to repair a lacerated peritoneum that will necessarily consume time it will be necessary to keep your patient under the anesthetic too long, unless you are a very rapid operator.

Dr. A. E. Hertzler of Kansas City. I believe the question is largely one of training of the operator. The thorough knowledge of anatomy. There is no question that the novice will get along better through the abdominal route than through the vaginal. Just where we place the limitation depends upon conditions. Formerly I was more enthusiastic in the support of the vaginal route than I am at present. Anatomy I will do from below, but an ectomy from above. I have had better results in doing both along this line.

Dr. C. Lester Hall, of Kansas City:—I was particularly impressed with what Dr. Campbell said about the limitations of this operation. Dr. Campbell, like many progressive men, has indulged in frequent changes. Last year I read a paper in regard to the abdominal and vaginal route; I gave preference to the abdominal route. I had no more enthusiastic supporter than the Doctor. I do not believe he wishes to reverse himself, but I do believe he has not properly stated the limitations of the vaginal route. I do not think he means that it is well to bring down pus tubes through the vagina. I do not believe he would do it. I do not believe he would bring down tissues, whether infected or not, through the vagina, and risk infection thereby. I do not believe that in a case of pus tubes, he would feel that he had done safe work by this procedure. If we are going to limit it to simple uterine displacements in which the attachments are made low down, barely above the internal os, it is possible it has a value. I do not think this operation will ever become popularized in America. I think that the abdominal route will be the route of choice.

Dr. A. R. Kieffer of St. Louis:—We will all have to concede that, notwithstanding the satisfactory results of his work, the abdominal route is growing in favor for work in the pelvis. It seems that this work was done principally for the purpose of correcting retro-flexions. I do not believe we are ever justified in opening the abdominal cavity for the purpose of shortening the round ligaments

alone. In the first place, by the vaginal route you expose the peritoneal cavity. This increases the danger especially where there is some degree of infection as nearly always is the case where there is laceration of the cervix. An important objection is that we use up the best part of the ligament in doubling it on itself, no matter what operation we do, and leave the weakest part to support the strain. Recently while doing an Alexander operation I found the ligament greatly shortened extremely attenuated in the vaginal canal. Shortening this ligament in the ordinary way would have left a very weak point of attachments, but according to the Alexander operation it was left good and strong. Dr. Hirst, whose opinion I respect most highly, states that of all operations done for the cure of retro displacements, those done through the vagina are the least satisfactory as regards relapses and post-operative adhesions. I want to emphasize the opinion that I do not think we are ever justified in opening the peritoneal cavity for the single purpose of shortening the round ligament. In doing all kinds of round ligament operations, it is very desirable that the patient wear a pessary, for the purpose of keeping the cervix well back. This is particularly necessary in cases of long standing. The vaginal route interferes with a pessary during convalescence. I am surprised that such good results were obtained and no pessary used.

Dr. P. Y. Tupper of St. Louis:—I believe that with an increased experience in this operation, more can be gained and better results accomplished. Still, I have never as yet felt that enough is gained generally to justify the procedure of operating through small openings. There was at one time a strong tendency in favor of these small openings. Operators did all they could to minimize the size of the opening. We know for instance that in appendectomies there was quite a bit of stress laid upon doing the operation through a very small opening and in doing the operation in a very short time. I think that is putting a premium on a dangerous procedure which I believe resulted in disaster very frequently. The ordinary operator through the route recommended by Dr. Campbell, would not have sufficient room to do anything more than a very simple operation, such as doubling up the round ligament, and attaching it, so I would suggest that we bear in mind what has been said about the limitation of the operation. When we make an incision through the vaginal wall and endeavor to determine by touch the exact relation and condition of the pelvic organs, we often find when additional opening is made through the abdominal wall that there exists quite a different state of affairs than that which seemed apparent to the touch. I think the use of this small opening is rather to be criticized. We should use preferably a route which will give us accurate knowledge of the relation of the structures and the state they are in. If knowledge can

be gained by touch alone, greater knowledge can be gained by both touch and sight.

Dr. Campbell, in closing: In regard to Dr. Dorsett's remarks, I will say in justification of the title of the paper, that had it been the practice of the surgeons of the state of Missouri to give the anterior vaginal coeliotomy incision the position that it should have, then the title suggested would be all right, but the fact is, this incision is not generally used, and therefore, I wished to call attention to it and to claim that it was a legitimate surgical procedure; also to indicate the limitations of the work that could be done through this incision, especially as observed by myself. Now good men, of course, change their minds; intelligent men do, but as charged by Dr. Hall, I have not changed my mind as to the class of work that should be done through this incision. I outlined the class of work that I do through this incision. Pus tubes were not mentioned as one of the pathological conditions that I attack through this incision; therefore I did not have to reverse my position. My paper takes a limited view of the work that I recommended being done through this incision, but I state that I am not considering the possibilities of the incision. If the surgeons and gynecologists of the Middle West were doing as much work as Emil Reiss, of Chicago, and some of the leading men of the Eastern states, then I would have written a very different paper for this society.

In reply to Dr. Kieffer will say that in cases of hyperplasia of the uterus associated with retro-displacements, any method of correction by shortening of the round ligaments will prove ineffectual. In this class of cases better and more permanent results are obtained by suspension of the uterus by means of the round and broad ligaments, or from ventro-suspension.

There should be no objections raised to opening the peritoneum, either through an abdominal or a vaginal incision, as it can be done with absolute safety. The class of cases enumerated in my paper were cases of simple retro-displacements, where repair was needed to the cervix and pelvic floor. The mere correction of the retro-displacements without repairing the pelvic floor would not be good surgery. It is this class of cases in which the anterior vaginal coeliotomy incision is most applicable.



## THE NERVOUS SYSTEM OF THE CHILD IN RELATION TO ITS DEVELOPMENT.\*

BY SCOTT P. CHILD, M. D., KANSAS CITY, MO.

Nature never produces two like individuals. In the first division of the nucleus of the fertilized ovum two equal, or physically and chemically similar, cells do not result. The microscope never reveals two neurones of exact size and form. The oculist fails to find two eyes with equal vision. Identical potentialities do not exist in the twins of any species, nor in the children of any parents. Yet this universal lack of similarity does not argue that many normal individuals may not nor do not exist. Size, shape, physical and chemical content do not indicate the normal, rather does the individual's adaptability to its environment.

Considering the average individual child of today in relation to the many contending factors which are influencing it in its development, can it be said to be growing into a strong, self controlled adult? Does it possess a stable mentality? Is its nervous system in a state of equilibrium in relation to its surroundings? And further, is the environment of the growing child of a character which can be expected to develop the normal? The evenly balanced?

Be it man, a lower animal, or a plant, the individual is a composite of heredity, environment and a specific personal element. These three factors all and always play a part, though in varying proportion throughout the life history of the child, and especially of its nervous system. As Conklin has stated: "Weisman's theory that all characteristics and qualities of the individual are predetermined by the biophors or determinents of the chromatin of the germ cell, is too arbitrary for general or universal application." Darwin has conclusively shown: "That differences in species are produced in some way by outside influences, or by the organisms reaction in adjustments to those influences." Burbank likewise corroborates this in his experiments with plant life, and shows that differences can be produced in a comparatively short time. In like manner changes in character, in mental characteristics and nervous manifestations, are found to result when the surrounding influences of children are changed.

Heredity manifestly has its influence, and may be controlling, especially where the inherited tendencies are permitted to continue unabated, or are positively stimulated. Children of alcoholic, syphilitic

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\*Read at the annual meeting, Jefferson City, May, 1906.

or epileptic forebears commonly manifest abnormalities dependent upon inherent qualities. The offspring of neurotic parents quite universally possess unstable nervous systems, but it should not be overlooked that such children grow up with an environment, in their parents, which forms a large part of the cause of their neuroses or mental perversions. Likewise the narrow chested, weazened babe of a tubercular mother is most evidently a hereditary sufferer, but feeding at the maternal breast which is supplying a deficient, if not poisonous, food and breathing an atmosphere laden with germs, this tendency is bound to be augmented.

Admitting the strong influences heredity plays in the physical development of species, in racial characteristics, and in many of the mental and nervous tendencies of the individual, it cannot be too strongly impressed upon us that a child's future growth and development depend largely upon the surrounding influences, in all their variety, physical and psychical, which impress the nervous system and thus the whole organism.

Life is the response of the living organism to external stimulation. The recognition of one's environment and the response to its influence is through the stimulation of the special and common sense organs, and the conveyance of messages to and from the cortical and spinal centers over the peripheral neurones. Thoughts and ideas may be inherent or intuitive, but we have no rational evidence pointing thereto. On the other hand, as the babe's eyes receive impressions of sight, as its organs of hearing are stimulated by sonorous waves, and as its sense of touch is awakened by pressure, images are made, and ideas, consonant with and dependent upon such external impressions, are produced. Then as the babe grows into childhood it interprets its surroundings in a language conforming to its original and continuing sense impressions and experiences. All this but proves the great influence the individual's environment has in developing its nervous system, and especially its mind.

In taking two children at birth and considering their discipline and development we have two distinctly different propositions. One child may be practically normal as regards its physical and intimately connected nervous systems—the other may have some physical or nervous defect—but the future of both will depend very largely upon those factors and influences among which they are placed.

A babe nursed and reared at the breast of a devoted mother will develop into a very different child than if brought up by foster parents. It is recognized even in the epileptic or choreic child that environmental influence are usually the immediate cause of the seizures. But the environment of the babe, as of the adult, comprehends much more than those stimuli of the special and common sense. Just as truly is every particle of food which enters the digestive tract,

and every drug introduced into its organism, as well as every external suggestion, a part of its environment. And such influences effect markedly the nervous system in depressing or exciting it.

As we step out of babyhood among the growing children, especially of our cities, one is impressed with the great number of high strung, precocious individuals with nervous systems abnormal and fast breaking down. Go into the streets, into the slums, and among the poor and illiterate, and see the children over whom parents have no control save through the instilling of fear or the use of brute force. Here you see nervous systems so responsive to severe discipline and suggestion that thought of punishment makes the boy or girl cringe or become angered to overt act. It was not only during the time of Hugo in France and Dickens in England, that the slum child and the dependent were immersed in an environment of vice and crime that proved as an iron mould. In the poorer, neglected, quarters of our cities today, bright, innocent children are living, waiting for the good hand to lift them up, but creeping of necessity into a circle which will hold them down, while teaching and forming them like unto themselves. Brought up on profanity, obscenity and slang, drinking from the common mug, and dancing on the knee of the low minded, can we expect other creatures? With their minds and reflexes developed in this way what can be expected as these children enter puberty? Every sense is abnormal and perverted. Every passion is on the *qui vive* and its slightest stimulation causes, as the case may be, a loss of virute or a criminal deed. It is not at all uncommon to find boys on reaching puberty beginning at the same time lives of vice and crime, and girls entering upon lives of abuse and prostitution. Caldo<sup>1</sup> says: "Most prostitutes fall between the ages of fifteen and eighteen." In Washington City, during the year 1904, out of 23,000 arrests for disorderly conduct, intoxication, and other offenses, more than one-fourth were among youths less than twenty-one years of age, and 1500 had not as yet reached the age of sixteen.<sup>2</sup> The Juvenile Court of Denver reports that nearly one-fourth of all arrests in that city have been among boys under seventeen years of age. Most careful records show that "More than 50 per cent. of the inmates of prisons and public institutions of this country are there as the result of neglect and habits formed during the years between eight and sixteen." Is it a necessity? Is it a cruel fatality that a sixteen year old boy should have murdered his father for refusing him a team to take a drive, and be incarcerated in our State Penitentiary? What of series of homicides and suicides among the young and recently married in Kansas City during the past few years? Whether a necessity or not, it surely is almost inevitable that such crimes do occur, and more remarkable that they are so few, when we consider the character and lack of training, that is the environment of such individuals.



As we turn to the children of the better class do we find their environment so different? The degradation, ignorance and poverty are absent. The common vulgarity and looseness of morals are largely eliminated. But what of the thousand and one impressions which impinge upon the special and common sense organs of these children, thus over stimulating and perverting them? The lack of parental control and restraint, the indiscriminate intimacy of the sexes during pubescence, the frequenting of theatre and pleasure resorts during the growing emotional life, and their early entering in the commercial struggle; all these conditions make up a large part of the daily environment of this class.

In the public schools their minds are put to the severest tests, without special regard to individual development; the special senses are stimulated to the extreme by imperfect surroundings, and too great requirements, while the backward mentality and imperfect senses are made worse. Precocity, which should invariably be held in check when manifested, is quite commonly encouraged to the pupil's future injury.

Acknowledging the great strides made in our present educational system, it is by no means what it should be, and Jacobi<sup>3</sup> has reason for saying: "Our schools have become hot houses in which scoliosis, anaemia, chlorosis, myopia, neuresthenia and cerebral exhaustion are being bred in incredible numbers." In the schools of our large cities is this especially marked. According to a recent report<sup>4</sup> (1902) of four primary schools in New York City, with an attendance of 13,941, there were 136 suffering from chorea. In local schools of our state cases of this affliction develop every year, and the severity and, not infrequently, the causes are found in the character and quantity of work required. Likewise the special senses, which react directly upon the central nervous system, are so often put to the test. Out of the four schools just mentioned 3,219 children were suffering from defective vision, and 460 from imperfect hearing. Compaired of Madrid claims that 20 per cent. of school children have ear trouble and consequent deafness, much of which could be benefitted or cured if proper attention was given in time.

In Chicago where "Child Study"<sup>5</sup> in the public schools is a special feature, it is found that the conditions and environment of school life cause and increase defects of vision. Especially is this true about the age of nine years, when mentally children normally advance. But as defects of vision and hearing increase it is observed that the pupils retrograde mentally.

In other cities of this country the same facts are noted, and abroad the findings along similar lines are even more striking. In a very careful study of 4,245 pupils in the Moscow schools Zak<sup>6</sup> found that there was an almost steady increase in the nervous condition of pupils

from 10 to 17. Starting with a percentage of 8.3 per cent. showing some nervous manifestation at 10 years of age, it had increased to 66.6 per cent. at 17 years. In the New York schools previously mentioned there were "823 whose mentality was bad," that is 6 per cent. According to C. Stanley Hall,<sup>7</sup> "1 per cent. of the school population is deficient, and it is they who will become our defectives and delinquents unless properly trained."

Futhermore, within all walks of society, both in school and without, there exists another class of children with a mental or nervous condition most unfortunate, namely, the epileptic. In their relation to society, in their comfort and safety, and for the peace of mind of their families and associates, they demand special consideration. In numbers they are sufficient to cause no little concern. Statistics<sup>8</sup> show that in some of our larger states such as New York, Illinois and Iowa, there is one epileptic to every 500 to 600 of the population, while according to the last United States census report, the mortality from epilepsy which in 1890 was 2.8. per cent., had increased to 3.2 per cent. in 1900. That epilepsy is primarily a disease of childhood is shown in the fact that between 25 per cent. and 35 percent. of those suffering with the condition are less than 10 years, and about 50 per cent. are between the ages of 10 to 20.<sup>9</sup> Epilepsy, as is generally acknowledged, is hereditary, or has back of it a neurotic ancestry. From a series of 1070 cases Spratling attributes 16 per cent. to a similar heredity, while 14 per cent. had an alcoholic parentage. According to Podstata's observation 20 per cent. to 28 per cent. are the offspring of inebriates.

Another serious problem in the environment of the present, as of past, generations, is that of child labor. Due to the greed of man, to inefficient school laws and to parental ignorance and poverty, the question has been forced upon us until it is now one of national scope and recognition. It is illustrated in factory, in coal mine, department store and the diversified trades. There are, it is true, some 28 states which have more or less perfect labor laws restricting the employment of children under specified years, as 12, 13, and 14, but in few states can it be said that these laws are enforced. In the decade from 1890 to 1900 there was an increase of 40 per cent. in the employment of child labor,<sup>10</sup> and today 2,000,000 children<sup>15</sup> under 16 years of age, who should be at play or in school, are toiling in our various manufactories and industries.

It is needless to say that child labor such as involved in factory or industry of any description, with long hours, monotonous work, and the constant strain on mind and special senses, can have anything but a tendency to stunt and pervert the child, both physically and mentally. The department stores and messenger service show us many anaemic, high strung, bright but illiterate and unbalanced children, taken from

home influence early, and now struggling with men and women. But what of their future? As Felix Adler says<sup>12</sup> "the effects of precocity labor are arrest of mental development." He instances "The brilliant but short lived intelligence of many news boys, their high strung excitability, their sinister anticipation of world knowledge, followed often by torpor or mental exhaustion." Only the other day I had occasion to ask a young messenger boy in Kansas City his age. His reply in a tone of haughty maturity was "Oh, I'm thirteen and old enough to marry." Child labor enters the period of childhood and adolescence when long hours, monotonous work, association with elders and questionable companions, all tend to prevent normal development. Certain faculties may be very acute, but a well balanced mind never results.

Many remedies for these conditions which are doing so much to undermine the nervous system of the child are being undertaken today, as never before, and the outlook is most hopeful, but the work is being attempted very largely under the initiative of the sociologist and educator, the courts and state governments. Society has the right to expect, and is demanding that this and succeeding generations have the opportunity to grow up with a different environment and also a better inheritance. In order that this be accomplished we, as a profession, must join forces with the sociologist, the educator and the courts and give them the benefit of our knowledge and experience.

We should recognize our obligations to parents in educating them as to preconception and prenatal influences, which may effect for good or ill the offspring. Parents and society at large should be informed as they are not, that a child at birth is not adapted to its new environment; that its nervous system, particularly its special senses, should be but slightly stimulated. Its environment of light, sound and pressure should be subdued and non-irritating. It should be urged that a child's physical development, not its mental, is the first consideration. And above everything the child should be kept largely in the fresh air and sun light of "God's out of doors" which does so much for the symmetrical development of all organic life. Then as the time comes to give attention to the child's mind, it should be not to test its brightness, its reasoning faculty, but rather its power of observation, which is the training of the special senses in harmony with their surroundings; thus the acquiring of memories, not the making of judgments.

Today commonly and naturally the child's educational career begins in the school, and here it is necessary that greater opportunity be given for systematic training and, above all, individual instruction. A fact which should not only be recognized in our public schools, but also be squarely met, is that no two minds do nor can acquire and assimilate knowledge at the same rate; further that the intellectual tastes and



talents of no two children are the same. Hence to avoid injustice to the individual, to render it impossible for one child to be dependent upon another, special classes should often be formed, for free and normal development.

Of equal importance with the strictly literary and scientific work is that of physical training. In truth, the former is dependent upon the latter. And here let it be impressed upon us that to secure and maintain a normal nervous system, the end which is sought, there should be in all schools two related departments. The one, having for its purpose the maintaining of an already practically normal nervous system; the other the correcting or building up of an abnormal one. The former is to be maintained by thoroughly acquainting the boy and girl with the anatomy and physiology of the body, the function of every organ and tissue, and the sane way in which to use them. A great fault in our public school system is that physiology is very superficially taught, and many functions, from a false sense of propriety, are not touched upon at all. In order that our sons and daughters be physically well developed, and mentally and morally strong, they must learn early not only that they possess nervous, circulatory, respiratory and muscular systems, but that they have a gastro-intestinal tract and genito-urinary organs with functions which are early to be recognized and controlled. Then in connection with this branch must be placed before them a required and graduated course in physical culture which will afford in the fresh air, the recreation and exercise each pupil may require for the needs of his or her organism.

The other related department is that which has been established in the public schools of many of our larger cities, namely, that of medical inspection. This should be made a permanent department of every public school system, for the purpose of suggesting, as indicated, specific treatment, a lessened amount of work or a changed environment. Children having disease or disturbance of the special senses require for their comfort and health an early diagnosis; those suffering from scoliosis, chorea, precocity or mental strain, should be given proper opportunity for rest and protection; while the mentally deficient and epileptic should invariably be removed from school and home and segregated in special institutions, the segregation promoting the welfare of the afflicted, and insuring the comfort and safety of society at large.

Still another group of influences to which we should give our support, just as much as to prophylaxis in smallpox or malaria, is that of the proper housing and beautifying of the city or town. Tenement and building restriction laws must be passed and enforced, which will insure sanitary and hygienic surroundings, perfect water and plumbing systems and plenty of fresh air and sunlight. Our park systems

must be literally extended into the dark and unsodded parts of the commonwealth where the children of the poor can really play and grow up with nature, instead of being submerged by the many degenerating artifices of civilization. But further, the numerous, needless noises of the city must be stilled, and the myriad sensational objects and advertisements which make unsightly thoroughfare and hillside, must be removed. It is needless to say what such a changed environment would accomplish.

The child offender and the so-called incorrigable represent a class which require special discipline and treatment differing widely from that imposed upon the adult criminal. For these the Juvenile Court and the Parental Home have been established in many cities, and are doing a wonderful work in reclamation. In order that this work be the most effective, the medical expert must be associated with the Judge to determine the cause of offense and to apply the penalty or treatment as indicated by the physical and mental condition of the child and his environment.

The magnitude and exigences of child labor, as already indicated, are very great, and "The National Child Labor Committee" is doing much towards its solution. The committee has been instrumental in securing the passage of laws in several states restricting the employment of children and in enforcing compulsory school attendance. To correct the greed of corporate wealth and the indifference and selfishness of parents, which keep the immature child at loom and bench, society must assert its authority, and demand that child labor in the varied manufacturies and industries cease. As medical men and physiologists knowing the harmful effects of constant, hard work upon both the body and mind of the child, we should give our earnest support to this movement.

Concerning the congenital sufferer, the most unfortunate of human kind, it is needless to say that he deserves as great consideration as the one born sound in body and mind. Carrie L. Grant<sup>13</sup> has well said that "The first great right of children is to be born well." That this is being generally recognized is shown in the agitation now going on in many state legislatures toward prohibiting the marriage of those suffering from certain specific disease. In many instances both the individuals afflicted and society at large would be benefitted could the temporal existence of such creatures be brought to an early termination. However, this right cannot be assumed by man. Nevertheless that this number in the future may be lessened, there is a means and that through the passage of a common law, state if not national, forbidding the marriage of the insane, the imbecile and epileptic, the inebriate, syphilitic, gonorrhoeic, and tubercular, until positive evidence of their cure exists for a specific term. No man or woman so afflicted has the ethical or legal right to give origin to offspring like unto themselves, with

all the misfortunes and limitations entailed. Michigan is a pioneer in having passed a law requiring a health certificate for marriage candidates; and New York is endeavoring to enact similar legislation. The citizens of Missouri, and especially the medical profession, should urge by our legislature, the enactment of such a law.

Such, gentlemen, are some of the means which either are being or should be resorted to for a changed environment and inheritance of the child. Along these and similar lines a continuous effort is necessary if we are to expect future generations to possess stable nervous systems; if we are to hope for a more ideal state of society, less dishonesty and graft, less vice, crime and disease, fewer mentally and nervously unbalanced. The profession of medicine, whose relations to patient, and to society in general, are rapidly enlarging, if not specifically changing, must give their cognizance to conditions as they exist, and lend their moral and active support to such remedial measures.

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#### DISCUSSION.

Dr. C. R. Woodson, St. Joseph:—I have not a word of criticism to offer in regard to this splendid and highly scientific paper. All that I desire is to add emphasis to the many important points brought out. As regards transmissibility, it is conceded that the offspring of parents of a very ugly and ungovernable temper are in danger, as well as those of epileptics, alcoholics, syphilitics, etc. This is true also of the offspring of parents of low mental development who are brought up in a poor environment and under conditions where there is a lack of mental food. It does not mean that because there is an ancestral taint the child must necessarily become epileptic, or chronic, or possess any of the characteristics of the neurotic tree, but the child with an ancestral taint should have special training. We all know that



sometimes a child with a very strong neurotic history is exceedingly bright. Rote learning is exceedingly damaging to this child. If such a child shows a particular aptitude for mathematics, music, or any other study, this should not be over-developed at the expense of the other centers, but rather there should be a rounding out of the mind. That child in which there is a strong ancestral taint, whether or not nervous, should be taught to bear disappointment and should be taught to control its temper. There is no question but such children have been thrown into attacks of epilepsy by harsh or unjust treatment by parents or teachers or by neighborhood boys. Much depends upon environment. A suitable environment, diversion, sufficient rest and reasonable recreation are essential to a proper development. Over-taxing of the mind or body should be guarded against. The physician can do good by helping to select the avocation, or the profession, and especially should he advise against things that are depressing, and by teaching the child that nothing can be gained by anxiety. Nothing is gained by unnecessarily crossing such children. Many teachers demand that a thing be done simply because it has been said that it should be done, and not because it is necessary that it should be done.

Dr. Wm. F. Kuhn, Farmington:—Heredity, environment and development are the three things we must consider in the development of the child's nervous system. Environment is the one thing of greatest importance in the moulding of the character of a degenerate child, but we can not get away from heredity. Degeneracy is on the increase and it is the degenerate child that must be guarded in its environment. Within the first five weeks of intrauterine life all the neurons are formed; from that time on it is simply a question of development of the elements of the nervous system. The moment this development of the elements of the neurons ceases we cease to develop. We know that the baby can not walk because the connections have not been fully completed, and when we take into consideration that from birth until six or eight years old the brain has grown from eight to forty ounces, we must appreciate the influence of environment on this development. If you have degenerate stuff to begin with, what kind of development are you going to get? Under the law of development it is the environment of the degenerate child that marks out its future course. The precocious child is a degenerate child and precocity is the mark that brands the child as such. The uric acid diathesis is nothing but degeneracy. There is no doubt but that our system of education, our foolish fathers and our foolish mothers, are making more degenerates every day by environment than result from intermarriages. If we would repeal the law against the marriage of healthy cousins and prohibit the marriage of idiots, drunkards, epileptics, ballot-box stuffers and boodlers, degeneracy would be on the decrease rather than on the increase, as it is now.

Dr. John Punton, Kansas City:—I endorse everything that Dr. Child has said. It is very refreshing to find young men reading papers of this character for I believe the trend of modern thought is toward prevention rather than toward attempting to cure existing diseases. But a few years ago the facts embodied in this paper were mere theories. In 1890 when I read a paper embodying theories, now facts, concerning marriage being governed by law and the necessity for medical inspection of schools, I was laughed to scorn by the men who heard it. They said it was splendid theory but poor practice. They thought it a practical impossibility to put these theories into practice, but I have seen some of the facts materialize into practice. I am sorry Missouri drags behind the lines in the matters of investigation referred to. Our school inspection is not what it should be. To-day, while schools are being examined, it is largely along the line of prevention of contagious diseases. But that does not touch the gist of the matter. It is the development of the nervous system of the child that is vastly more important and there should be some attempt to classify children from a physical standpoint and recognize their needs. I think the day is not far distant when the State Medical Society will endorse just such theoretical inspection which will later become absolute facts in Missouri. Children are naturally prone to nervous diseases in our system of education and as a matter of fact, the higher the mental organization, the higher the nervous organization, the more susceptible they are to disturbances of the nervous system. There is no doubt that heredity, environment and education play an important part in the development. The theories of today are the facts of tomorrow and we are at the dawn of a new era.

Dr. Woodson Moss, Columbia:—We are all benefitted by this paper. It will go into our publication and be read by the subscribers who are not here. But is that all the benefit we can get out of such papers by such men as Dr. Child's? We talk about laws but we cannot get laws passed until we can get people to vote for them and we cannot get people to vote for these things until we get people educated up to that point. The county medical societies should take upon themselves the reading of such papers as this before the members of the community in which they live. If Dr. Childs lived in my community I would see that he read that paper before the mothers and fathers of that community. If he would read that paper in my community before a crowd that I could get for him we would not have any trouble getting votes for some of the things we need. I make this suggestion to the profession of Kansas City. If I lived there I would see that Dr. Childs read that paper before the mothers and fathers of Kansas City that they might know what they are doing with their children. When the parents learn the truth about these things we will not need laws to drive out quackery and imposition.

The people will see we are on their side and we will get mighty close to them.

Dr. Childs, in closing:—I have little to add to what has been given in the paper, but I do wish to state that for the assured development of our children and for the welfare of future society, we must have a *stronger* government; one which will *enact* and enforce laws for a better environment. Of especial necessity is it that from general instruction, so universal in our public schools, individual training should be offered and given to most children. The cry of added expense should not be considered, for this would much more than be met by the lessened expense in caring for those who are diseased, deficient and delinquent, the number of whom would be greatly reduced.

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### APPARENT CERVICAL MENSTRUATION.\*

BY T. C. WITHERSPOON, M. D., ST. LOUIS.

Menstruation from the cervix is not accepted as a normal occurrence. Vicarious menstruation from the cervix or tubes, because of their close relationship to the body of the uterus (anatomic and histologic) is a possible conception though I find no evidence in literature that any one has observed such an assumption of function. The so-called vicarious menstruation from other tissues of the body than the genital tract, is not vicarious action but depends upon the presence of a lesion which because of heightened blood tension, altered chemic nature of the blood or both, bleeds periodically.

In this communication I shall report two cases in whom an apparent vicarious menstruation at regular intervals occurs from short healthy cervixes. Unfortunately both women live at a distance which makes it quite impossible to obtain a portion of the cervical mucous membrane during a period of flow. I wanted to present the microscopic findings at this time but hope the opportunity will be afforded me at some future time. I shall endeavor to give such parts of the history of each as bear directly upon the subject of this paper.

Mrs. A., 48 years old, the mother of four children, the eldest 22 years and the youngest 15, called upon me 5 years ago for relief. She suffered from pain in the lower abdomen, pelvis and back and from flatulence and constipation. Menstruation was regular but painful, being rather free and lasting 4 to 5 days. Examination revealed a retroflexed, sensitive uterus, thickened tubes and a pronounced cervical catarrh. Following an attempt to give relief through tampons and applications, I, in the fall of 1901, removed the tubes and fixed the

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\*Read before the St. Louis Medical Society, meeting of March 10, 1906.



uterus forward, attaching it to the anterior abdominal wall in accordance with the plan suggested by Olshausen and Kelly. Some improvement with gain in flesh followed the operation. Menstruation remained regular and became less painful. A little over a year ago she returned to me complaining of the former symptoms of bloating, pain in the pelvis and back, and of increased suffering—in every respect at the menstrual period. The uterus was still quite sensitive and was firmly attached to the abdominal wall; cervical discharge very annoying. I removed the uterus August 15, 1905, through an abdominal incision. The broad ligaments were clamped well down to the cervix upon either side and divided. The uterus was amputated by making a V incision into the cervix. The cervical mucous membrane was cauterized with 95 per cent. carbolic acid and the stump closed with catgut in two layers. The uterine arteries were closed by linen ligatures passed around them through the broad ligament. The ovarian and round ligaments were securely fastened to the top of the cervix by catgut suture. Healing was primary. Since the operation she has gained in flesh and feels much better. Immediately following the operation there was a bloody discharge from the vagina which lasted two days. The following month there was a menstuous flow and this has occurred regularly each month since. The character of the discharge is like that of normal menstruation; dark in color, without clotting, with very little odor. The amount has been about the same each time, requiring two napkins and lasting 24 to 36 hours. I made an examination on January 28th of this year and found a seemingly healthy cervix, not sensitive to touch and secreting a clear, viscid mucus. The canal measured  $\frac{1}{2}$  cm. in length and no bleeding followed the search made with a probe. There was no purulent discharge from the cervix and a careful inspection of the vagina revealed no lesion of that portion of the genital tract.

Mrs. B., 33 years old, is the mother of two children, one 8 and the other  $4\frac{1}{2}$ . There were two abortions between the children. For 5 or 6 years she suffered from very severe backache. The uterus was large, retroflexed and painful to touch. Menstruation fairly regular and quite free. Glycerine tampons were temporarily helpful. Two years and a half ago I removed both tubes and fixed the uterus forward as in the first case. This gave relief until this past spring and summer when the backache became almost intolerable again. Menstruation had been regular though scantier since the operation. Examination revealed a large sensitive uterus firmly attached to the abdominal wall. I removed the uterus through an abdominal incision following the same technic used in the first case. Immediately after the operation there was a bloody discharge from the vagina which lasted several days. Since then the menstuous flow has appeared regularly each month lasting 36 to 48 hours and sufficient in quantity to

soil several napkins. It corresponds in appearance to a normal menstrual discharge. The cervix at present is normal in appearance and secretes a clear mucus. There is no leucorrhœa. The cervical canal is 2 cms. long, insensitive and does not bleed at touch of the probe. There is no open lesion of the genital tract.

These histories are very similar. Both women had the tubes removed some time prior to the hysterectomy. In removing the tubes neither the uterus nor ovaries were disturbed nor was their normal vascular and nerve connection interrupted. The utero-abdominal attachment was made in the usual manner but did not elongate into the delicate suspending filaments described by Kelly. The uterus in each case was firmly attached to the abdominal wall, and undoubtedly a constant irritation was kept up in its pulling upon the unyielding support.

The technic used in the hysterectomies was the same. All direct nerve and vascular connections between the ovaries and cervixes were severed. The nerve branches from the hypogastric plexus and the plexiform network from the pelvic brain were severed as they passed from the cervixes into the body of the uteri. This left the cervixes with their rich, normal nerve supply. The blood through the ovarian and uterine arteries was shut off and the supply reached the cervixes through other pelvic vessels. The ovaries were healthy and were left in their normal attachment to the broad ligament.

Amputation of the uteri was done in such a manner as to make the closure broad and complete; no permanent stitch material was used from which a chronic discharge might originate. The cervixes at the present time are healthy. No vaginal lesion can be discovered from which a bloody discharge might take place. There is no abnormal descent of the uterus with a possible vascular engorgement. One of the women will soon cease menstruating on account of age.

I have two patients who have menstruated since supravaginal hysterectomy but sufficient corporal endometrium remains in each to account for it. In one the canal measures almost 4 cms. in length. The two cases reported in this paper have very short cervical canals and in all probability none of the corporal endometrium remains.

#### DISCUSSION.

Dr. Hugo Ehrenfest:—Hemorrhages from various sources are frequently observed after hysterectomy with or without extirpation of the ovaries. In Dr. Witherspoon's cases everything speaks in favor of the assumption that in these particular instances the regularly returning hemorrhage was a menstruation and this makes his cases unique. At first thought a menstruation from the cervix seems incompatible with our present conception of menstruation. The speaker cites the common text book definition of menstruation and proves that it is in-

correct in every point. Menstruation above all must be regarded a periodic wave in a woman's life, characterized by an increase of almost all functions, followed by a return to the normal state. This stage of return, as a rule, is marked by the appearance of a bloody discharge from the uterus. This hemorrhage undoubtedly is the most striking and obvious but not an essential symptom of menstruation. It is not by any means rare, that a normal function of the sexual organs, in the absence of a bloody discharge, is proved by the periodic appearance of the characteristic symptoms of this "wave" or by impregnation during the amenorrhoeic state.

Up to a comparatively short time ago it was the general belief that only the mucosa of the uterus can "menstruate" and furnish a suitable nidus for an impregnated ovum. To-day it is well known that another portion of the Muellerian ducts, the tubes, not only can shelter a fertilized ovum, but also participate regularly in the function of menstruation. Histologic changes, characteristic of the so-called premenstrual state of the endometrium, are almost typically found in the mucosa of the tubes, and it is now established beyond doubt, that in the absence of an uterus the tubes may act as substitutes and actually "menstruate." And now as to the third portion of the Muellerian ducts, which through their coalescence form the cervix. Only of late positive proof has been advanced for a fact, which a few years ago would have been ridiculed, namely that the cervix takes active part in the nidation of the fertilized ovum. Not only the formation of a decidua is possible in the cervical mucosa, but there is no doubt left, that the placenta may even be attached to cervical mucosa. Why should this mucosa then *a priori* be considered incapable of participating in menstruation? Why should a mucosa which evidently takes part in pregnancy, not be able to substitute the function of the endometrium in the absence of an uterus, if the tubal mucosa, or almost every mucosa of the body, e. g., that of the nose, the stomach, rectum, or conjunctiva is fit to menstruate "vicariously" under certain still unknown conditions, evidently dependent upon the histologic structure of this particular mucosa? In the speaker's opinion the assumption of a cervical menstruation would not seem to be in conflict with our present ideas concerning menstruation. Careful histologic examination of the cervical lining of menstruating uteri is likely to reveal a frequent, possibly a typical participation of the cervical mucosa in menstruation, exactly as now established for the tubal mucosa.

Dr. George Gellhorn: The sterility of the literature on the subject is proof of the excessive rarity of the condition reported by Dr. Witherspoon. And yet, one wonders why analogous cases have not frequently been recorded. From a theoretical standpoint, at least, it should not be surprising to encounter menstruation *i. e.*, a periodical flow of blood from the cervix since we know that, in the absence or in-



activity of the uterus, true instances of vicarious menstruation have been observed from mucous membranes, such as conjunctiva, bladder and nose, which, in their histologic structure, bear no resemblance to the mucosa of the uterine cavity. Such vicarious menstruations have even been reported to occur from the outer skin. As regards the genital tract, the mucosa of the Fallopian tubes, at times, shows traces of true menstruation though it resembles the endometrium less than does the cervical mucosa. On the other hand, cervix, vagina and vulva participate in menstruation only by an increased secretion of mucous.

Why is it that we never observe menstruation in the cervix under normal conditions? To discuss this question, we must rapidly review the vascularization of the uterus and the processes which take place within the uterine mucosa at the monthly period. As you know, the uterine artery sends a number of branches into the muscularis of the uterus. These branches suffer a division at the border between the outer and the median layers of the uterine muscle, and each of these secondary branches undergoes a renewed division in the inner muscular layer, near the border of the mucosa. By this time, the resulting branches are rather fine. They ascend within the endometrium along the tubular glands, sending off capillaries which completely surround the latter, and after they have arrived beneath the epithelium of the mucosa, they form there another very dense network or fine capillaries. The number of venous capillaries and smaller veins is considerably smaller than those of the arterial system. In the premenstrual period, *i. e.*, about ten days preceding the flow, an ever increasing afflux of blood to the genital organs, and mainly to the uterus, takes place. The mucosa of the latter begins to swell, the glands become tortuous, the interglandular tissue appears looser and edematous, the dilated arteries of the muscularies carry an increased volume of blood into the mucosa so that the capillaries, both the deep ones around the glands and particularly the superficial ones beneath the epithelium, are distended *ad maximum*. When the distention reaches its height, the venous capillaries cannot carry off the increased blood supply, and both transudation from, and rupture of the very thin arterial capillaries takes place. *The flow of blood, i. e., the outward manifestation of the menstrual wave, is thus merely a question of disturbed mechanics.*

The vascularization in the mucosa of the cervix differs widely from that of the endometrium in that (1) the arteries and veins and their capillaries have very much thicker walls, (2) that there are fewer arteries and veins, and (3) that the network of capillaries is less developed than in the endometrium. Therefore the veins can well carry out their function in spite of the increased blood supply. The active congestion in the cervix can never be as great as in the uterine cavity. Moreover, the vessels themselves are more resistant. *This, then, is the*

*reason why menstrual bleeding does not take place from the cervix.* This, at least, is my personal view after having studied the works of Waldeyer, Nagel and especially the excellent monograph of R. Freund.

The conclusion seems permissible that the same explanation may be applied to the numerous instances in which, as in Dr. Witherspoon's cases, after supravaginal amputation the cervix has been left behind. The anatomical structure of the latter, as I have endeavored to show, excludes menstrual hemorrhage. But here another factor comes into play. It has been observed beyond doubt that even healthy ovaries, after extirpation of the uterus, undergo atrophy within a relatively short time. If this be the case, the function of the ovary will grow less distinct, in other words, the stimulation from the ovary which causes the menstrual afflux of blood to the pelvic cavity, will grow weaker, and consequently the afflux of blood itself will gradually diminish. If this be true, two reasons exist which would satisfactorily explain the absence of menstruation from the cervix after supravaginal amputation of the uterus, *viz.*, (1) the peculiar structure of the cervix, (2) the diminished energy of menstrual afflux.

Should we not be justified in applying these arguments—in the way of an explanation—to the interesting observation of Dr. Witherspoon? There seems to my mind nothing illogical in assuming that his cases menstruated from the cervix, (1) because in these particular cases the vascularization of the mucosa cervicis was anomalously rich; the walls of the capillaries unusually thin; and the network of the latter exceptionally well developed; (2) because in these particular cases the ovaries did not atrophy and, by exerting their full influence upon a mucous membrane which was nearly identical with the uterine mucosa, produce a like affect, namely, true menstruation.

Dr. Walter B. Dorsett:—My object in rising this evening is to put on record one case which is one of two or three that I have noticed, the condition following a supravaginal amputation of the uterus. Mrs. R. J. M., was operated upon May 25th, 1904. A supravaginal hysterectomy was done, with removal of both tubes, both ovaries and the uterus. This woman has menstruated from the cervix regularly until January 6th, 1906, when she did not menstruate. She menstruated again February 1st to 6th. I have another case upon which I operated December, 1901, in which I removed both tubes and ovaries and left the uterus. This woman menstruated June 10th, 1904, for five days, November 18th, for five days, December 22nd, three days from August 2nd, 1905, five days from Sept. 30th, five days from October 17th. This patient has menstruated irregularly for four and a half years. The first case of this kind that came under my observation was a young woman in the Female Hospital, in 1888. She had had both ovaries removed. She was menstruating when she entered the hospital and as there was an abdominal scar and she said that Dr. Engleman

had operated upon her, I called him in and he was amazed. Tait claimed that the tubes had something to do with the function of menstruation. As Dr. Ehrenfest says, the textbooks say that menstruation is a periodical flow occurring once in twenty-eight days. We know that it is not only this but something more. They say it is composed of mucous, epithelium and blood probably because it comes from the uterus. They say that where the ovaries have been removed menstruation ceases. I know of one case where the ovaries have been removed and the patient has a flow of blood regularly from the rectum.

Dr. Glasgow has a patient whom he has to bleed every twenty-eight days because she has this periodic congestion. After a woman has menstruated for a number of years, when the ovaries are removed this habit continues, though probably not regularly. I know of one case I operated upon who later fell into the hands of Dr. Gellhorn. I am positive I removed those ovaries, but she is still menstruating.

Dr. F. J. Taussig:—There are a number of factors that would lead us to expect a menstruation from the cervix. The cervix as well as the fundus comes from the same Mullerian tract. Again, the character of the epithelium is not constant, we may have squamous epithelium in the fundus and cylindrical epithelium in the cervix. Again we may have decidua formed in the cervix. Last May I presented a case of pregnancy where the uterus had been removed. The decidua extended to a point  $1\frac{1}{4}$  inches below the internal os. Again we know that the placenta has been attached upon cervical tissue. In the *Monatschrift*, volume xx., of last year, Keitler reported a case of supravaginal amputation, one tube and ovary having been removed. The patient continued to menstruate regularly every month, the flow lasting two days instead of the usual four days. In this case there could be excluded any pathological condition of the cervix and there were no nervous disturbances such as occur at the artificial menopause. Keitler does not mention this as the only case he knows of menstruation from the cervix and I believe we will find that other cases have been mentioned in literature. The trouble is these cases are tucked away under some other head. This one was mentioned in the description of the conditions following supravaginal operation for myomatous uterus. Von Steinbuchel mentions an interesting case of tubal menstruation. When the uterus is present the bulk of the evidence points to the fact that no menstruation occurs from the tube except in the presence of some pathological condition of the uterus.

My impression was that the blood pressure was not highest at the beginning of the menstruation, but that the day before the bleeding commenced there was a sudden drop in the pressure and during the day preceding the onset of menstruation it was low. As to Dr. Gellhorn's view that the distribution of the bloodvessels is the cause of the bleeding from the uterus instead of the cervix, we know that when the



uterine artery is tied the most important blood supply of the ovary is taken away. Now it suggests itself that in this case the main artery was not tied off, therefore not only did the cervix get a good blood supply, but the ovary also. I hope Dr. Witherspoon will be fortunate enough to obtain some of the mucosa from this case and that he will be able to watch the patient through the menstruation. I think it is important that not only the patient's word be taken, but that the physician know positively that the blood is coming from the cervix. Again, it would be of advantage to know that the mucosa of the cervix is cervical mucosa.

As to Dr. Dorsett's case, he does not mention the size of the canal; if he knew the exact length of the canal it would add weight to the report of the case. There are a number of cases of a third ovary being present and the assumption that menstruation takes place without any ovary being present is not proven except by clinical facts, and these are not enough.

Dr. Davis Forster:—Hallman showed that after taking out the ovaries there was an atrophy not only of the uterus but also of the breasts. After the removal of the ovaries we have the artificial menopause. Robt. Morris of New York, proved that menstruation could be reestablished. He engrafted the ovary of a woman of eighteen into the cul-de-sac of a woman of 30 who had had ovaries removed and had ceased to menstruate two years before, with the result that he established a resumption of the menstruation. Hence, one function of the ovary is that of throwing off the ovum, beginning earlier in life and continuing later than menstruation, the other function is to throw into the blood current an internal secretion and this secretion is the cause of menstruation. Therefore, Dr. Witherspoon having left within the abdomen two ovaries doing their normal work, it was right and proper that this woman should menstruate because of the presence in her blood of the ovarian secretion which caused a heightened blood pressure. Had he removed the cervix and left the ovaries functioning, she would have menstruated from some other mucous membrane.

Dr. Gellhorn:—Were the uterine mucosa not constructed as it is, internal secretion of the ovary and the wave-like fluctuation of the female organism could not produce any regular flow of blood. This is the point that I intended to emphasize. Inasmuch as the cervical mucosa is constructed differently from the uterine mucosa, menstrual bleeding does not and can not occur, except in rare cases where this difference in the histologic structure is less pronounced or entirely absent. The only proof needed would be a section through one of these cervixes, and a glance through the microscope. So long as this last proof is not furnished, I admit that my explanation also remains theoretical, but my views are, at least, based, upon known facts, and

not upon uncertain clinical observation, hypothetical habits of bleeding, and the vague theory of vicariation. It is not generally appreciated that instances of true vicarious menstruation are excessively rare. If the views held by Dr. Dorsett and Dr. Murphy were correct, we would find vicarious menstruation in the large number of cases of supravaginal amputation of the uterus, where one or both normal ovaries have been left behind.

Dr. Dorsett:—I would ask Dr. Ehrenfest whether he believes that the menstruation as described in Dr. Witherspoon's case is a true menstruation.

Dr. Ehrenfest:—Yes, I believe so.

Dr. Witherspoon:—I wished to make clear just what had been done. The cervix was closed completely with catgut in two rows, giving a broad apposition. There was no apparent disease of the cervix. The secretion was quite normal. These patients tell me that the menstuous discharge occurs regularly lasting twenty-four to thirty-six hours in one case and in the other thirty-six to forty-eight hours. When I removed the uterus no damage at all was done to the ovary. Unfortunately I cannot keep the patients under close observation. I would like to know whether the bloody discharge occurs at the moment of greatest blood pressure or whether, as shown recently by an article in the *Johns Hopkins Bulletin*, just after it has fallen. If we could prove that these bleedings occur after the drop in blood pressure it would be clear then that they are not due to the blood pressure but to specific endometrial function.

# Journal Missouri State Medical Association

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Published Monthly under the supervision of the Publishing Committee.

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PUBLICATION COMMITTEE:

C. M. NICHOLSON,

WALTER B. DORSETT.

B. M. HYPES.

W. G. MOORE.

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## EDITORIAL.

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### THE ST. LOUIS MEDICAL LIBRARY ASSOCIATION.

The seventh annual report of the librarian of the St. Louis Medical Library shows that during the past year there have been added 3,315 volumes, making the total number of bound volumes 8,647. Of these 1,800 were loaned by the St. Louis Public Library and the remainder are contributions from individuals.

In addition to the bound volumes the library receives 137 medical journals, an increase of eleven over last year. The indexing of the original subject matter contained in the medical journals has been continued and extended, thus materially increasing the usefulness of the library. Seventy-five of the journals are thus indexed.

Since the report of the librarian was submitted we learn that the St. Louis Mercantile Library has transferred all of its medical books to the St. Louis Medical Library. This donation adds 1,700 volume to the number mentioned above, making the total number of bound volumes 10,347.

Additional floor space will be needed to afford shelf room for the rapidly increasing number of books and arrangements are under headway whereby the third floor of the building will be remodeled and utilized for preserving the books.

The association is composed of 184 members, a comparatively small number which it is hoped will increase rapidly.

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### ERRORS IN LIST OF DELEGATES.

In the published proceedings of the last annual meeting the following counties should have been credited with representation in the House of Delegates as their delegates were present: Camden County.



Sherman Mills, Delegate; Harrison County, A. H. Vandivert, Delegate; Ralls County, T. J. Downing, Delegate; Schuyler County, W. F. Mitchell, Delegate.

Such omissions render the proceedings incomplete and cause dissatisfaction. We suggest that every delegate be furnished with credentials signed by the president and the secretary of the county society. This certificate if deposited with the state secretary at any time during the meeting will obviate errors in making up the list of delegates in attendance.

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#### RE-ORGANIZATION OF SULLIVAN COUNTY.

Sullivan County Medical Society was re-organized at a meeting held on June 26th. It was decided to hold meetings quarterly but we hope this will be changed soon so that meetings will be held once a month. The enthusiasm manifested at this meeting is a promise that the members of Sullivan County Medical Society do not intend to allow their organization to fall behind in its work in the future. Dr. W. L. M. Witter was elected president, and Dr. J. S. Montgomery, secretary.

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#### COMMITTEE ON PUBLIC HEALTH AND LEGISLATION.

Below we publish a synopsis of the proceedings of the committee on public health and legislation at a meeting held in St. Louis, July 10th, in which the representatives of the various county societies participated. Some of the questions considered at this meeting require prompt attention on the part of the county societies.

A new bill on criminal abortion should be introduced at the next meeting of the legislature. The St. Louis Medical Society, having employed competent legal authority to draft a bill covering this law, the committee requested that copies be furnished its secretary who will send them to the affiliated societies for their approval; the bill will then be presented in both houses of the legislature as a measure coming from the State Medical Association. Other bills should be introduced, such as a bill limiting to one year the time in which action may be brought against physicians for alleged malpractice, a pure food bill and a new medical practice act. At present there is no provision for preserving a record of the vital and mortuary statistics of the state. Such statistics are of great importance not only from a medical standpoint but because they furnish positive data on the birth and death of the inhabitants which can be employed as evidence in the courts when necessary. A board of examiners separate from the state board of health is strongly urged. The establishment of county health boards received considerable attention but no definite

conclusion was reached as to the best manner of making these appointments.

These are subjects for consideration by the county societies before the legislature meets. Action should be taken and, through the member of the legislative committee of each county society, means should be proposed which seem best suited to accomplish the end desired. We hope the members will read the following report very carefully and bring up these questions in the county societies at the first opportunity.

MEETING OF THE COMMITTEE ON PUBLIC HEALTH AND LEGISLATION,  
CONJOINTLY WITH REPRESENTATIVES FROM THE COUNTY MED-  
ICAL SOCIETIES APPOINTED TO CONFER WITH THE COM-  
MITTEE. SOUTHERN HOTEL, ST. LOUIS,  
JULY 10, 1906.

The meeting was called to order by the Chairman, Dr. Lutz, at 10 a. m. The following members were present: Of the Committee, Drs. Lutz and Pearse. Of the county society representatives: Drs. Bonham, Howard county; Cuppaidge, Randolph county; Highsmith, Carroll county; Powell, Howell county; Crowson, Nodaway county; Nichols, Callaway county; Poston, St. Francois county; Thrailkill, Jackson county; Prentis, Cass county; Cave, Audrain county; Norwine, Butler county; Van Meter, Barton county; Austin, Chariton county; Addington, Grundy county; W. P. Smith, Lincoln county; Baysinger, Phelps county; Holtzen, Benton county; Harris, Lawrence county; Grim, Adair county; Cozzens and Newberry, Madison county; Chapman, Mississippi county; Craig, Vernon county; Nicholson, St. Louis city; Redman, Platte county; Allee, Miller county; Fassett, Buchanan county; Seba, Gasconade-Maries-Osage counties; Pitman, St. Louis county; Bell, St. Clair county; Moss, Boone county. Others present, from the state board of health: Drs. Thatcher, Adcock, Armstrong, Goodier, Hamel. Visitors: Drs. Bartcher, Moore.

CRIMINAL ABORTION.

On motion, Dr. Nicholson, of St. Louis, was requested to present such measures as the St. Louis Medical Society had agreed upon.

Dr. Nicholson said the St. Louis Medical Society had employed attorneys to draft a bill on criminal abortion; and that bills on a pure food law and on medical practice were also under consideration. Dr. Pearse moved that copies of the bill on criminal abortion now being prepared for the St. Louis Medical Society be obtained and sent to the various county medical societies for their consideration and endorsement, with the request that the county society take action at the first opportunity and return the bill to this committee before the first of October. Carried.

## MEDICAL PRACTICE ACT AND STATE BOARD OF HEALTH.

Dr. Nicholson moved that proper legal authority be employed to draft bills, one a pure food bill and another on medical practice. Carried.

The Chair stated that the medical practice act should be amended so that the fees obtained from young men taking the examinations for a license to practice should not be drawn upon for the maintenance of the state board of health; and if the state board of health was of value to the state the expenses for maintaining it should be paid out of the state treasury. He said also that there should be a separate board appointed for the examination of applicants to practice medicine.

Dr. Goodier suggested that this body ask the Homeopathic and Eclectic physicians to meet and confer with the committee in the preparation of these laws.

The Chair said there should be some legislation enacted whereby the medical profession will become a more important factor in directing the public health of the state and that the county societies should take up the consideration of the question of what can be done in this respect.

Dr. Thatcher suggested that some provision be made for remunerating the members of the state board of health and if a new bill is drafted this provision should be incorporated in it.

Dr. Pearse said the question of having the state medical association suggest to the Governor the names of the members of the state board of health should be considered, the idea being to furnish a list of names consisting of one from each congressional district for each vacancy on the board.

Dr. Thrailkill was in favor of a law similar to the California law.

## BOARD OF EXAMINERS.

Dr. Thrailkill thought there should be a separate board of examiners, the state board of health to look after sanitary matters and the examining board to examine applicants to practice. The members of the state board of health should have the endorsement of the State Medical Association and that association should elect the members of the board of examiners, divided between the different schools.

Dr. Baysinger thought it would be well to have a re-registration of all physicians in the state, issuing licenses only to those who could pass the examination.

Dr. Adcock said that part of the medical practice act should be repealed which provides for applicants to practice medicine without a diploma.



## PURE FOOD LAW.

Dr. Bartscher asked that the State Medical Association work in harmony with the joint pure food commission and read the following communication:

*Chairman and Members of the Committee on Public Health and Legislation of the State Medical Association:*

Gentlemen:—The Joint "Pure Food" Committee, appointed to draft and have introduced in the next session of the Missouri Legislature a "Pure Food" bill, hereby respectfully request that your committee place itself on record as favoring "Pure Food" legislation in general and endorse the action of the North St. Louis Citizens' Association and the other associations represented on our joint committee, in particular.

That you advise the association you represent, to request the members of the county medical societies to instruct the general public as to the advisability and urgent necessity of such legislation so as to arouse in the people an interest in the subject.

And, finally, that when the bill has been introduced in the Legislature of our state, if its provisions meet your approval, you and the organization you represent co-operate with the Joint "Pure Food" Committee in securing its passage.

Respectfully,

H. W. BARTSCHER, M. D.

Chairman, Joint "Pure Food" Committee.

## WHISKEY PRESCRIPTIONS.

Dr. Newberry moved that it is the sense of this meeting that the law which passed the Senate be asked for by the physicians of this state at the next meeting of the general assembly and that it be incorporated in the law. Carried. The law reads as follows:

## DRUGGISTS AND THEIR LICENSES.

An act to amend chapter 23 of the Revised Statutes of Missouri, 1899, in Relation to Druggists and their Licenses by adding a new section thereto, to be known as section 3048a.

Section 1. Druggists to file copy of prescription for intoxicating liquors, etc.

Be it enacted by the General Assembly of the State of Missouri, as follows:

Section 1. That chapter 23 of the Revised Statutes of Missouri, 1899, be and the same is hereby amended by adding a new section thereto, to be known as section 3048a, to read as follows:

Section 3048a. Every druggist, proprietor of a drug store or pharmacist shall, on the first Monday of each and every month, file with the county clerk of the county in which he is doing business, a

copy of all prescriptions containing twenty per cent. or more of alcohol or intoxicating liquors compounded by him or those in his employ during the preceding month, and said copies of said prescriptions shall be accompanied by an affidavit of the druggist, proprietor of a drug store or pharmacist stating that said copies so filed are true, and are copies of all such prescriptions filed by him or those in his employ during the preceding month; and on failing, neglecting or refusing to do so, shall be deemed guilty of a misdemeanor, and on conviction shall be punished by a fine not less than fifty dollars nor more than two hundred dollars.

Failing to secure the above, he suggested the following:

An act to amend Article 1 of Chapter III of the Revised Statutes of the State of Missouri of 1899, entitled "Health, Board of," by adding a new section thereto, to be known as section 7529b.

Section 1. State Board of Health to examine and make copies of prescriptions, etc.

Section 2. Violation—punishment.

Be it enacted by the General Assembly of the State of Missouri, as follows:

Section 1. That Article 1 of Chapter III of the Revised Statutes of Missouri of 1899, entitled "Health, board of," be and the same is hereby amended by adding a new section thereto, to be known as section 7579b, and which section shall read as follows:

Section 7579b. The state board of health, or any member thereof, is authorized and empowered to visit and examine the prescription files of each and every druggist, proprietor of a drug store or pharmacist doing business in the State of Missouri.

And said state board of health, or any member thereof, may make copies of any or all prescriptions compounded by said druggists, proprietor of a drug store or pharmacist, said copies to be used by said state board of health in any manner it may deem fit and proper. And any member of said state board of health shall have the power to administer oaths to any person whose testimony may be required in the examination or copying of said prescriptions.

Section 2. Any druggist, proprietor of a drug store or pharmacist refusing to permit an examination or copy to be made of said prescriptions as provided in the preceding section, shall be deemed guilty of a misdemeanor, and on conviction shall be fined not less than one hundred nor more than five hundred dollars.

#### COUNTY POOR FARMS.

Dr. Highsmith stated that the poor farm in his county was in a deplorable condition and that no law existed under which relief could be obtained. He suggested that a law be passed by which county courts would be authorized to order the issuance of bonds,

or such other means as might provide funds for restoring poor farms. Representatives from several other counties complained that a similar condition existed in their districts.

The Chair stated that our JOURNAL exists for the very purpose of agitating just such questions and suggested that Dr. Highsmith have the subject properly presented and forward the matter to the editor of the JOURNAL. In this way it will be placed before the members of the association and arouse discussion from which may come relief.

#### COUNTY HEALTH BOARDS.

Dr. Addington said the present law for the appointment of county boards of health should be amended so that the county medical societies shall appoint or name the county health officer, or have that officer under the supervision of the county medical society.

Dr. Smith, of Troy, thought the county health officers should be appointed by the state board of health and be under the supervision of that body.

Dr. Seba thought the coroner should be the county health officer also.

Dr. Van Meter and others were in favor of the state board of health appointing the county board, the latter to consist of three members.

Drs. Thrailkill and Smith said the county medical society should endorse the members of the county board before they were appointed.

Dr. Highsmith said his county had a very efficient medical man on the county board of health and the present system seemed to work very satisfactorily.

Dr. Norwine thought the county health officers should be appointed by the state board and receive appropriate remuneration for their services.

Dr. Fassett thought there might be friction in having bills paid if the appointing power was taken away from the county and put in the hands of the state board of health or elsewhere.

Dr. Graham thought the average county court had a good idea of who would be an efficient man to appoint as health officer and believed the present law should stand.

Dr. Van Meter said the county court very often showed poor judgment in the selection of health officers. He instanced a case in which a health officer appointed by the court was a very ignorant and incompetent person. He was in favor of the state board of health appointing the county health officer with the recommendation of the county medical society.

Dr. Highsmith said there was little difference between the county medical society recommending the health officer to the county court



or to the state board of health. The courts as a rule are an intelligent body of men and usually appoint good men but they would not appoint any one out of harmony with themselves.

A vote was taken upon the three views, resulting as follows: For having a county medical society recommend or appoint the health officer, ayes 5.

For having the state board of health recommend or appoint three men as the county board of health, ayes 18.

For having the present law stand as it is, ayes 2.

Attorney Frey suggests that the board consists of the county clerk, the coroner and a physician appointed by the state board of health. Make a statutory provision compelling these boards to organize in each county, make it obligatory upon the county to pay their bills. The present law is weak, because the county court both incurs expenses and pays all bills and is criticised on account of the expense.

#### HEALTH OFFICER IN ADMINISTRATION.

Dr. Moss said we should begin to look forward to having a medical officer in the administration of our state government—a department of public health and hygiene.

#### VITAL AND MORTUARY STATISTICS.

Dr. Adcock suggested that a bill be drafted providing for an adequate system of collecting the vital and mortuary statistics of the state.

Dr. Seba said he had given this subject considerable thought and suggested that it be made the duty of the assessor in accordance with the following:

"It shall be the duty of the assessor of each county, at the time he is listing the taxable property of the county, to enumerate the births and deaths that may have occurred during the year just preceding the first day of June, and have the same recorded in the county clerks' office, such records to be known as the Vital and Mortuary Statistics of the County in which they occur; and the assessor shall receive the sum of five cents for every such report thus filed and recorded. It shall be the duty of the state board of health to furnish each assessor throughout the state with suitable blanks for the taking and recording of births and deaths, and it shall be the duty of every licensed physician, midwife, undertaker or other person, when called upon by the assessor, to give additional facts concerning the birth or death of which said person asked shall have knowledge of, when such facts shall make such report of more scientific value. All laws in conflict herewith are hereby repealed."

Dr. Allee thought the law which formerly was in force might be tried again allowing a fee for every report made.

The report should be made to the county clerk and the record kept on file in his office.

Dr. Pittman said we would have difficulty in enforcing any laws until we had educated the people to a knowledge of the benefit to them which these laws carried. He believed that most physicians, like himself, through neglect and carelessness had ceased making these reports.

#### PATENT MEDICINES.

Dr. Nichols called up the motion of the house of delegates relative to the bill recommended by *Collier's Weekly* and the *Ladies' Home Journal* and asked what action was to be taken.

Dr. Moss moved that the editor of the JOURNAL be requested to ask the editors of *Collier's Weekly* and of the *Ladies' Home Journal* what steps have been taken toward securing the passage of the laws recommended by them concerning patent medicines and nostrums. Carried.

#### SUMMARY.

There was some general talk along all the lines discussed.

A suggestion from Dr. Thrailkill that this committee meet once every year met with very general approval.

Dr. Moss moved that the editor publish in the JOURNAL such part of the proceedings as was decided after conference with the Chair to be appropriate for publication.

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#### EXAMINATIONS BY STATE BOARD OF HEALTH.

The next meeting of the Missouri State Board of Health for the examination of applicants for license to practice medicine and surgery will be held in St. Louis, Mo., on August 8th, 9th and 10th, at Barnes Medical College, beginning at 9 a. m. Midwives will be examined on the 10th.

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#### A RESOLUTION.

At the Boston session of the American Medical Association, the following resolution was introduced by Dr. E. Eliot Harris, of New York, and on motion of Dr. C. E. Cantrell, of Texas, was unanimously adopted:

"Resolved, That the Committee on Publication of the journals of medicine published by the State Medical Associations affiliated with this body, be asked to assist the Board of Trustees in their efforts to suppress the advertisements of medical nostrums and to co-operate in the work of securing pure food and pure drug laws in the United States."

OBITUARY.

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## CHARLES LESTER SPAULDING, M. D.

Dr. Charles Lester Spaulding, of Kansas City, met his death suddenly on June 24th by falling through the elevator shaft in the Argyle building.

Dr. Spaulding was born in North Adams, Mass., 36 years ago. He received his degree of Bachelor of Arts from Williams College in 1890, and A. M. and M. D. degrees from Harvard in 1897, and M. D. diploma from Bellevue Hospital, New York, in 1898. He was head surgeon of the Massachusetts hospital ship during the Cuban war and had charge of the Red Cross hospital ship in the Venezuelan revolution. He was professor of orthopedic surgery in the Kansas University.

The following resolutions were unanimously adopted by the Jackson County Medical Society at a special meeting held on July 12th:

"Whereas, Dr. Chas Lester Spaulding, a loyal member of this society, has been removed from us by an accident that resulted in his death; therefore be it

"Resolved, That the Jackson County Medical Society and the State, have sustained an irreparable loss in his death by virtue of his high achievements already attained, while owing to his youth and ambition his future was rich in promise—for the morning of his professional life was not yet in sight of its noon; added to all this was an unimpeachable moral character;

"Resolved, That the severance of his relations as a citizen also entails a great loss to the city, county and state in which he resided;

"Resolved, That sadness is added to his tragic death because of his marital relations which he was soon to assume;

"Resolved, That a copy of these resolutions be spread upon the minutes of this society, and copies be sent to his bereaved family and relatives; and that the members of the Jackson County Medical Society in a body attend the funeral services of their departed friend and brother."



## COUNTY SOCIETY NOTES.

## CALDWELL COUNTY MEDICAL SOCIETY.

Caldwell County Medical Society met at Kidder on July 11th with a fair attendance of members.

Dr. DeLamater read a paper on "Pulmonary Emphysema." Dr. W. S. Shouse read a paper on the "Importance of Early Diagnosis of Tuberculosis;" Dr. L. J. Eads, "Cholera Infantum," and Dr. J. M. W. Cannon, "The Management of Abortion." Dr. G. W. Grove, of Kansas City, was a visitor and reported a case of "Obscure Pyemia of Uncertain Origin." Dr. G. M. McConkey, of Mirabile, was elected to membership. The following officers were elected for the next year: President, Dr. W. T. Lindley, vice president, Dr. H. DeLamater; secretary, treasurer and reporter, Dr. Tinsley Brown; censors, Drs. J. M. W. Cannon, W. S. Shouse and C. C. Leeper.

The next meeting will be held at Hamilton on October 3rd and Daviess County Medical Society will be invited to meet in joint session.

TINSLEY BROWN, M. D., Reporter.

## CARROLL COUNTY MEDICAL SOCIETY.

## MEETING OF JUNE 13TH.

Regular monthly meeting was held at Carrollton, on June 13th. The morning session was devoted to reporting clinical cases and the discussion which followed their presentation was full of benefit and interest to all. The society took up the matter of improving the condition of the county infirmary. A committee consisting of Drs. Cooper, Highsmith and Cook was appointed to wait upon the county court and devise ways and means through which to bring this subject before the public with the view of securing the funds necessary for the more humane treatment of our county poor.

The afternoon session was made interesting by a discussion of the subject "Summer Disorders of Children." Several cases were reported.

## MEETING OF JULY 11TH.

The July meeting was held at Hale, the local profession receiving the members with a hearty welcome.

The morning session consisted of a general discussion on clinical cases reported by various members.

In the afternoon the subject of fracture was opened for general discussion and many cases were reported.

The report from the committee appointed to investigate the con-

ditions of the county poor house was submitted and received. The committee reports the poor house in a very deplorable condition, unfit for use and a disgrace to Carroll County. A conference with the county court was barren of results except to emphasize the fact that there was no law under which the court could act in order to institute measures for the improvement of the conditions at the county poor farm. Our society has determined to spare no effort toward remedying this state of affairs in our county. A legislative committee of four has therefore been appointed to work in conjunction with the board of health and take the matter before the state legislature with the view of obtaining relief by act of the general assembly.

The next meeting will be held at Carrollton on August 8th.

R. M. MILLER, Reporter.

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### CASS COUNTY MEDICAL SOCIETY.

The regular meeting convened at Harrisonville on July 5th with nearly one-half of all the physicians in the county present. The papers read at this meeting were as follows: Hysteria, by Dr. H. S. Prentiss; Intestinal Disorders, by Dr. G. M. Anderson; A Fee Bill by Dr. B. E. Dawson; Syphilis in the Kneejoint, by Dr. H. A. Brierly; Cystitis in the Old Man, by Dr. Herman E. Pearse of Kansas City. These papers were well received, general discussion following the reading of each one.

Dr. M. P. Overholtzer and Dr. J. S. Triplett, respectively councilor and delegate, read their reports from the Jefferson City meeting of the State Association. Reports were full of encouragement for the members to continue in the work of maintaining our organization and showed the good that is being done in Missouri through the efforts of a united profession. Dr. Pearse spoke of the work which the committee on public health and legislation expected to accomplish this winter in the general assembly and asked for the co-operation of Cass County Society. Dr. Jerard of Pleasant Hill was selected to represent our Society at the meeting of this committee in St. Louis on July 10th.

Four new members have been enrolled, viz., Dr. R. M. Smith, R. H. Burney, D. W. Conger and Mart Hammond.

Twenty-one physicians were present at the meeting which was probably the most interesting one that we have held since our organization in 1902. Interest in the society is extending throughout the county and we predict that every qualified physician in Cass County will become a member.

W. F. CHAFFIN, Reporter.

## CLINTON COUNTY MEDICAL SOCIETY.

Clinton County Medical Society met at Plattsburg on June 5th with a full attendance of members. Dr. B. W. Ray, delegate to the state meeting, reported on the work done at the meeting of the State Association at Jefferson City. Dr. John Sturgis gave a short talk on society organization and Dr. J. W. Winn made some interesting remarks on the subject of requirements of delegates. Dr. G. B. Rush read a paper on acute diarrhoea which was freely discussed. Dr. E. A. Colley read a paper on the choice of an anesthetic which brought out a very general discussion. Drs. P. M. Stechman and J. W. Winn were appointed to read papers at the next meeting.

E. A. COLLEY, M. D., Secretary.

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## COOPER COUNTY MEDICAL SOCIETY.

Cooper County Medical Society met in regular monthly session at Boonville on July 3d. Eleven members present.

Clinical cases presented for discussion were as follows: Dr. E. M. Allee reported a case of multilocular cyst of the uterus which was expelled from the uterus intact after pains resembling labor pains. Dr. A. J. Smith presented a specimen of fibroid of the uterus. Dr. W. H. Elliott reported a case of senile gangrene of the foot. All members present took active part in the discussion of the cases and the specimen presented.

The board of censors having reported favorably upon the application of Dr. W. H. Elliott, of Bunceton, he was elected to membership.

The joint-meeting of the Howard-Boone and Cooper County Medical Societies was brought before the Society and it was decided to hold the meeting in Boonville, July 20th. The secretary was directed to inform the secretaries of Boone and Howard as to the time and place of meeting.

The name of Dr. W. A. Nelson of Bunceton was presented and referred to the board of censors.

The next meeting will be held at Bunceton on the first Tuesday in September.

JOHN R. LIONBERGER, M. D., Secretary.

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## HOWARD COUNTY MEDICAL SOCIETY.

MEETING OF JUNE 1ST.

Howard County Medical Society met in the office of the secretary at Fayette on June 1st, eight members being present. Drs. Moore and Wright gave a very interesting talk on the treatment of syphilis which was followed by a very general discussion.



Dr. C. B. Burguin was elected to membership in the society. The society heartily approved the new officials of the State Medical Association and the State Journal.

#### MEETING OF JULY 6TH.

Howard County Medical Society met at Glasgow on July 6th. Eleven members were present. The cases of exophthalmic goitre, orchitis, Bell's Paralysis and hemiplegia were presented and aroused a very interesting discussion.

Howard County Medical Society accepted the invitation to meet with Boone County and Cooper County on July 20th. Dr. B. Q. Bonham was appointed to represent this society at the meeting of the committee on public health and legislation in St. Louis on July 10th. The society heartily endorsed the report of the committee on public health and legislation as printed in the July issue of the Journal, favoring a board of examiners separate from the state board of health and the state to pay all the expenses of the state board of health.

C. W. WATTS, M. D., Reporter.

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#### KNOX COUNTY MEDICAL SOCIETY.

At the regular meeting of the Knox County Medical Society, held on July 2nd, Dr. L. S. Brown opened the discussion of Infantile Diarrhoea. He was followed by Dr. J. W. Northcutt.

The Beard method of treatment of cancer with Trypsin was discussed and one case reported by Dr. Northcutt. He with others mentioned abscess formation as an objection to the treatment.

Dr. Jurgens, delegate at the Jefferson City meeting of the State Association made his report to the society.

H. JURGENS, Secretary.

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#### LAFAYETTE COUNTY MEDICAL SOCIETY.

Regular meetings of this society are held every other month, the last meeting on July 10th, at Higginsville. The attendance at this meeting was the largest in our history. A very general feeling of interest in the welfare of the society was manifest and we believe that in a very short time we will have every reputable physician in our county on our roll of membership. Dr. Tiffany of Kansas City was a guest at this meeting and presented a very interesting and instructive clinic. It was decided to have all meetings at Higginsville.

C. T. RYLAND, Secretary.

## MISSISSIPPI COUNTY MEDICAL SOCIETY.

## MEETING OF JUNE 11TH.

The regular session was held in Charleston, on June 11th. Report of the committee on the application of Dr. J. W. Lynch being favorable, Dr. Lynch was elected to membership. On motion the by-laws were amended as follows: The regular meeting shall be on the first Monday of each month, the hour and place of meeting to be ordered by the president. On motion the following resolution was adopted: Resolved that the members of the Mississippi County Medical Society refuse to make any life insurance examinations for less than \$5.00. In addition to this resolution the following amendment was adopted: Resolved that the members of this society charge an additional mileage fee of 50c. per mile during the day and \$1.00 per mile at night for all insurance examinations made in the county. Dr. A. W. Chapman was elected to represent Mississippi County Medical Society at the meeting of the committee on public health and legislation on July 10th.

## MEETING OF JULY 2ND.

Regular meeting was held on Monday, July 2nd, at Bertrand, seven members being present. Dr. A. W. Chapman presented a paper on abortion in which he reported a number of cases treated by the plan outlined by him, all resulting favorably. Discussion was freely indulged in by the members present.

A special meeting will be held on September 3rd, and Dr. W. F. Kuhn, superintendent of the state asylum No. 4, Farmington, Mo., has been invited to deliver the address. Members from adjoining counties have been invited to attend. The next regular meeting will be held in Charleston, on August 6th.

R. K. OGILVIE, Reporter.

## MONITEAU COUNTY MEDICAL SOCIETY.

Regular meeting was held at Tipton, on June 14th, thirteen members in attendance and two visitors, one from Cooper and one from Morgan County. The following papers were read: Dr. G. S. Wilson on the treatment of Tracoma; Dr. J. W. Marsh read a paper entitled "Consideration of Chronic Diseases of the Liver"; and Dr. W. H. Elliott read a "Report of Case of Cancer Treated by the X-Ray." These papers were highly commended and the discussion was very interesting.

Dr. Latham reported a case of cancer treated by the x-ray. Dr. W. R. Patterson presented a case of pityriasis tosea in a boy of six years.

This meeting was one of the best in the history of our society and

many expressed themselves as delighted with the enthusiasm which these meetings has aroused.

The next meeting will be held at Latham on September 13th.

W. R. PATTERSON, Reporter.

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#### NEW MADRID COUNTY MEDICAL SOCIETY.

At the meeting held on June 7th, Dr. Atkisson read a paper on Multiple Pregnancy Complicated by Septic Fever. Dr. Williams read a paper on the treatment of Pneumonia. Both these papers were generally discussed by all members present. Drs. Diggs and Timberman of Marston were elected to membership. By the acquisition of these two members the society gains two young and active workers. On motion it was decided to change the time of meeting from the first Thursday in every month to the first Thursday in February, April, June, August, October and December. After adjournment the society was entertained by the New Madrid members.

W. J. SPARHAWK, Reporter.

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#### PEMISCOT COUNTY MEDICAL SOCIETY.

At the regular meeting held in Steele on May 8th, Dr. Granger presented a case of organic disease of the heart. The patient was examined by the members and there was considerable discussion on this subject.

The Rev. Dr. Pritchel, was presented by request and talked on the subject of Prohibition.

Dr. G. W. Phillips read a paper on "The Duty of the Members to the County Society and the Benefits to be Derived." Drs. Hudgens, Lutens and Granger took part in the discussion.

Drs. Otto Turley and T. S. Cooper of Steele, were elected members.

The next meeting will be held at Caruthersville on July 10th.

J. W. JOHNSON, Secretary.

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#### PULASKI COUNTY MEDICAL SOCIETY.

Pulaski County Medical Society met at Crocker on June 4th. Dr. Johnson of Rolla was present and gave an interesting talk on the rights of the physician and the patient. The following officers were elected: Dr. W. L. Ragan, president; Dr. E. A. Oliver, secretary.

The next meeting will be held the first Monday in August at Waynesville.

E. A. OLIVER, Secretary.



## RALLS COUNTY MEDICAL SOCIETY.

Regular meeting was called to order by Dr. Harwood at Spaulding Springs, on July 12th. Eighteen physicians were present, including a number of visitors from other counties. The scientific program consisted of a symposium on appendicitis. Under this head Drs. C. W. Pryor, Fred. Walter and R. W. Winn read papers.

Dr. J. S. Howell read a paper on pathology and symptoms of glycoma; Dr. W. L. Burney reported a case of brain injury; Dr. E. T. Hornbeck read a paper on chronic hypertrified tonsil and Dr. W. T. Waters read a paper on alcohol. The meeting was a very enthusiastic one and all of the papers were received with much interest.

Among the visitors was the councillor of our district, Dr. L. W. Dallas, Drs. Howell, Hornbeck, Reed and Banks, of Hannibal and Dr. Strode of St. Louis.

T. J. DOWNING, Secretary.

## ST. LOUIS COUNTY MEDICAL SOCIETY.

St. Louis County Medical Society held its regular meeting on June 13th, at Kirkwood. Dr. Forsyth read an interesting paper on Gonorrhoea in the female which aroused considerable discussion among the members. Dr. John Pitman was elected a delegate to the meeting of the committee on public health and legislation held in St. Louis on July 10th.

The next meeting will be held in September.

R. D. MOORE, M.D., Reporter.

## ST. LOUIS MEDICAL SOCIETY.

MEETING OF MAY 26TH, 1906.

The St. Louis Medical Society met in regular session on May 26th, in the hall of the Y. M. C. A. building, one hundred and twenty members present.

The society at this meeting had as its guest two distinguished surgeons, Dr. M. H. Richardson, of Boston, who read a paper, entitled "Further Observations on Dissection of the Biliary Tract, with Special Reference to Diagnosis," and Dr. Alfred Duehrssen, chief surgeon in the Royal Prussian University at Berlin, who discussed "Operative Procedures through the Vagina, in Gynecology. Both subjects were ably handled and discussed by a number of the members of the society.

MEETING OF JUNE 2ND.

The elections committee reported favorably on the following named physicians, who were elected to associate membership.

Percival C. Barnes, 5434 Maple Ave. Charles H. Dixon, Lister Building. Theodore Greiner, 5532 Easton Ave. M. W. Jacobs, 1403 O'Fallon. H. D. Kistler, 2719 S. Compton Ave. Charles L. Klenk, 2108 S. Broadway. A. Merz, 2001 Cherokee. Frank P. Poignee, 816 Hickory. C. E. F. Streutker, 3828 S. Broadway. John Wolf, 2626 S. Broadway. A. O. Young, 3141 Lawton Ave.

The scientific program for the evening was a symposium on Clean Milk. Dr. G. M. Tuttle read a paper entitled "The American Movement to Obtain Clean Milk," with report on the use of certified milk.

Dr. John Zabrisky, "The Foreign Movement to obtain Clean Milk," with report on the use of certified milk.

Dr. A. S. Bleyer, "Bacteriological Contamination of Milk." Discussion by Drs. Scharp, Tuttle, Chapman, Barclay, Falk and Blair. Dr. O. H. Elbrecht presented a specimen of Hydonephrosis removed from a woman five months pregnant.

At the suggestion of the committee on public health and legislation, that committee was increased to fifty members. Among those appointed were many of the leading clerical, legal and business men of the city.

#### MEETING OF JUNE 9TH.

The scientific program consisted of two papers; one by Dr. W. H. Stauffer, "The Treatment of Hemorrhoids," and "Ano Rectal Fistula" by Dr. J. D. Potts. The papers were discussed by Drs. Barnes, Blair Amyt, Stauffer, and Potts.

#### MEETING OF JUNE 16TH.

The elections committee having reported favorably on the application of Dr. R. E. Graul, Joseph F. Mayes, and Nathaniel W. Semple. they were elected to membership.

Scientific Program.—By Dr. Malvern B. Clopton, "The Surgical Treatment of Epithelioma;" By Dr. H. P. Wells, "The X-Ray Treatment of Epithelioma;" By Dr. W. H. Mook, Presentation of cases: Lupus Hypertrophicus, Frambæsi-form Syphilis, Multiple Epithelioma following burns, and Multiple Facial Epithelioma. By Dr. Joseph Grindon, "A Case of Lupus treated by X-Ray, followed by Cancer," Recovery after operation. By Dr. A. V. L. Brokaw, Radiographs of interesting cases.

I. E. GRAHAM, M. D., Reporter.

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#### STE. GENEVIEVE COUNTY MEDICAL SOCIETY.

Regular monthly meeting was held at Ste. Genevieve on June 16th. Dr. Meyer presented a case of ankylosis of the kneejoint. Dr. G. M. Rutledge was appointed a delegate, Dr. F. E. Hinch alternate to meet with the committee on public health and legislation in St.

Louis on July 10th. A contribution was collected from the members which was forwarded to the California fund in care of the Journal American Medical Association.

R. W. LANNING, Secretary.

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### STODDARD COUNTY MEDICAL SOCIETY.

The regular bi-monthly meeting was held at Bernie on July 18th, 12 members present. This was an open meeting and a number of the citizens of Bernie attended.

The names of Drs. Ryan and Goad, of Bernie, were presented for membership.

Dr. E. L. Elmore, of Puxico, was elected to membership.

Dr. Winters read a paper on "Summer Diarrhoea" which was discussed by Drs. Turnbaugh, Vernon, Slayden, Corbin, Wingo and Ashley. Dr. Corbin reported a case of "Progressive Caries of the Toes with Specimen." Essex was selected as the place for the next meeting on the first Wednesday in September at 10 a. m.

After adjournment the members were entertained at a dinner given by the local profession. Mr. R. L. Allen responded to the toast "The Law," Dr. Geo. W. Vernon "Medicine," Prof. R. F. Jones, "Pedagogy" and Elder J. R. Wheatley "The Ministry."

GEO. W. VERNON, M. D., Reporter.

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### SULLIVAN COUNTY MEDICAL SOCIETY.

Sullivan County Medical Society met at Milan, June 26th and re-organized. Dr. W. L. M. Witter was chosen president, Dr. J. W. Helton, vice-president and Dr. J. S. Montgomery, secretary. It was determined to hold quarterly meetings and a committee was appointed consisting of Drs. Porter, Mairs, and Widner to arrange programs for the next meeting. There were eight members present and all expressed the deepest interest in the welfare of the society and a determination to bring in the remaining members of the profession and have our society become an active working body once more.

J. S. MONTGOMERY, Secretary.

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### WAYNE COUNTY MEDICAL SOCIETY.

Wayne County Medical Society met in regular session at Williamsville on June 20th. The application of Dr. J. P. Price for membership was approved and he was elected a member. There was a gen-



eral discussion on the subject of the practice of medicine, especially bearing upon midwifery and upon the question of fees for examinations for life insurance companies. A committee was appointed to draft resolutions and report at the next meeting.

Dr. G. W. Toney was appointed to represent Wayne County at the meeting of the committee on public health and legislation in St. Louis on July 10th.

Dr. Jesse W. Hale reported an interesting clinical case of abscess just below Poupart's ligament. There were six members present and two visitors.

#### MEETING OF JULY 17TH.

The July meeting was held at Patterson. The application of Dr. O. A. Myers, of Coldwater, was favorably reported and he was elected a member. The following officers were elected for the ensuing year: President, J. P. Sebastian; 1st vice president, S. A. Bates; 2nd vice president, J. W. Hale; 3rd vice president, C. H. Jones.

R. J. OWENS, Secretary.

The committee appointed to draw up resolutions concerning the fees for examinations for life insurance reported as follows:

"Whereas many of the 'Old Line' Life Insurance Companies are reducing medical examination fees from \$5.00 to \$3.00, therefore, be it

Resolved by this, the Wayne County Medical Society, that we (the members thereof) will charge all such companies \$5.00 for each examination." On motion the resolution was adopted and the JOURNAL requested to publish it. A committee was appointed to draft resolutions covering fees for the examinations of members of fraternal societies. Dr. O. A. Myers reported a case of injury to the foot caused by a circular saw.

This was followed by a general discussion of prevailing diseases.

The following members were appointed to read papers at the next meeting: Drs. G. W. Toney, J. W. Hale, C. H. Jones, S. A. Bates, J. P. Sebastian and W. S. Bailey.

R. J. OWEN, M. D., Secretary.

# OFFICIAL ROSTER

## Missouri State Medical Association

ORGANIZED 1857

### Members of Affiliated County Societies

#### ADAIR COUNTY.

Brown, D. T., Novinger, Mo.  
Bulkley, J. F., Nind, Mo.  
Callison, E. C., Kirksville, Mo.  
Davis, I. L., Connelville, Mo.  
Grim, E. A., Kirksville, Mo.  
Grim, E. C., Kirksville, Mo.  
Gashwiler, J. S., Novinger, Mo.  
Hanks, James, Brashear, Mo.  
Martin, J. W., Kirksville, Mo.  
Quinn, Ed. S., Kirksville, Mo.  
Wilson, C. S., Gibbs, Mo.

#### ANDREW COUNTY.

Bennett, E. C., Bolckow, Mo.  
Best, W. W., Bolckow, Mo.  
Damour, F., Bolckow, Mo.  
Jefferies, C. O., Savannah, Mo.

#### ATCHISON COUNTY.

Chamberlain, G. W. E., Rockport, Mo.  
Chamberlain, O. M. C., Rockport, Mo.  
Holliday, J. A., Tarkio, Mo.  
Hunter, J. A., Fairfax, Mo.  
Lott, G. W., Westboro, Mo.  
McMichael, A., Rockport, Mo.  
Postlewaite, J. A., Tarkio, Mo.  
Richards, E. E., Tarkio, Mo.  
Safford, W. G., Tarkio, Mo.  
Settles, Chas. T., Rockport, Mo.  
Strickland, W. R., Rockport, Mo.  
Taylor, E. P., Fairfax, Mo.  
Waugh, C. M., Tarkio, Mo.  
Whitford, E. P., Westboro, Mo.

#### AUDRAIN COUNTY.

Alford, R. L., Vandalia, Mo.  
Berrey, R. W., Mexico, Mo.  
Bland, W. W., Vandalia, Mo.  
Cave, E. S., Mexico, Mo.  
Coil, P. E., Mexico, Mo.  
Cornett, W. E., Rush Hill, Mo.  
Crawford, M. E., Mexico, Mo.  
Douglass, W. H., Benton City, Mo.  
Flynt, J. F., Moline, Mo.  
Gibbs, R. T., Mexico, Mo.  
Jordon, J. E., Rowena, Mo.  
Lanier, J. H., Martinsburg, Mo.  
Lofton, E. A., Laddonia, Mo.  
McCall, W. K., Worcester, Mo.  
Parish, J. C., Vandalia, Mo.  
Rodes, N. R., Mexico, Mo.  
Rothwell, C. A., Mexico, Mo.  
Stuart, Jno., Benton City, Mo.  
Wallace, J. E., Mexico, Mo.

#### BARRY COUNTY.

Dusenbury, C. T., Monett, Mo.  
Gladden, R. B., Monett, Mo.  
Hagler, M. C., Monett, Mo.  
Hawkins, A. S., Monett, Mo.  
Jones, Alva, Monett, Mo.  
Miller, D. E., Monett, Mo.  
Mitchell, D. L., Cassville, Mo.  
Mitchell, John, Purdy, Mo.

Newman, S. A., Cassville, Mo.  
Northcutt, L. B., Washburn, Mo.  
Russell, J. M., Monett, Mo.  
Searcy, Wm. P., Exeter, Mo.  
Trumbower, M. R., Monett, Mo.  
West, Wm. M., Monett, Mo.

#### BARTON COUNTY.

Allee, G. D., Lamar, Mo.  
Clark, J. W., Liberal, Mo.  
Cole, J. K., Lamar, Mo.  
Coleman, W. O., Nashville, Mo.  
Cromley, J. F., Lamar, Mo.  
Duckett, T. H., Millford, Mo.  
Gish, G. J. P., Liberal, Mo.  
Gish, J. S., Liberal, Mo.  
Griffin, W. L., Lamar, Mo.  
McComb, J. L., Lamar, Mo.  
McKelvey, W. A., Minden Mines, Mo.  
Miller, E. F., Verdella, Mo.  
Roberts, M. G., Lexington, Mo.  
Smith, C. A., Liberal, Mo.  
Stone, A. B., Lamar, Mo.  
Thompson, G. T., Golden City, Mo.  
Van Meter, A., Lamar, Mo.

#### BATES COUNTY.

Boulware, T. C., Butler, Mo.  
Chastain, E. N., Butler, Mo.  
Compton, U. J., Pleasant Gap, Mo.  
Coulson, J. R., Spruce, Mo.  
Delometer, G. A., Rich Hill, Mo.  
Forster, T. W., Butler, Mo.  
Gilmore, E. E., Adrian, Mo.  
Hulett, R. F., Rich Hill, Mo.  
Lancaster, W. H., Rich Hill, Mo.  
Lockwood, T. F., Butler, Mo.  
Lyle, A. E., Butler, Mo.  
Martin, J. R., Merwin, Mo.  
Miller, Sherman, Maysburg, Mo.  
Rhodes, H. A., Foster, Mo.  
Whipple, N. L., Pleasant Gap, Mo.

#### BENTON COUNTY.

Clark, J. W., Fristoe, Mo.  
Davis, S. O., Warsaw, Mo.  
Dick, M., Cole Camp, Mo.  
Greeson, G. A., Lincoln, Mo., R. F. D.  
Holtzen, E. E., Cole Camp, Mo.  
Jones, W. G., Lincoln, Mo.  
Lemon, F. F., Lincoln, Mo.  
Rhodes, E. L., Lincoln, Mo.  
Schwald, N. A., Cole Camp, Mo.  
Stratton S. O., Edmonson, Mo.  
Walton, J. H., Ionia, Mo.  
Woods, G. W., Mounds, Ind. Ter.

#### BOONE COUNTY

Austin, R. S., Hallsville, Mo.  
Austin, C. W., Columbia, Mo.  
Calvert W. J., Columbia, Mo.  
Carhart, W. G., Columbia, Mo.  
Chinn, E. H., Rocheport, Mo.  
Douglass, W. H., Columbia, Mo.  
Fisher, J. M., Columbia, Mo.  
Gentry, E. N., Sturgeon, Mo.

Gordon, J., Columbia, Mo.  
Jackson, C. M., Columbia, Mo.  
McAlester, A. W., Columbia, Mo.  
McAllister, W. A., Centralia, Mo.  
McComas, A. R., Sturgeon, Mo.  
Meyer, Max, Columbia, Mo.  
Miller, W. McN., Columbia, Mo.  
Moss, Woodson, Columbia, Mo.  
Nifong, F. G., Columbia, Mo.  
Norris, W. A., Columbia, Mo.  
Noyes, Guy, Columbia, Mo.  
Thornton, J. E., Columbia, Mo.

BUCHANAN COUNTY.

(All addresses St. Joseph, Mo., unless otherwise stated.)

Bansbach, J. J., 825 Fred Ave.  
Ballard, E. S., Hughes Bldg.  
Bauman, L. C., 4th & Edmond.  
Bell, J. M., 710 Felix St.  
Byrne, J. I., Bk. of Commerce Bldg.  
Campbell, O. B., Hughes Bldg.  
Carpenter, S. F., Hughes Bldg.  
Dandurant, L. J., 8th & Felix St.  
Deffenbaugh, W. B., 710 Felix St.  
Donelan, E. A., 622 Francis St.  
Doyle, T. H., 107 N. 9th St.  
Doyle, J. M., 107 N. 9th St.  
Dunsmore, J. M., 9th & Charles St.  
Davis, E. C., 2018 S. 11th St.  
Elam, W. T., Logan Blk.  
Farber, M. J., 520½ Francis St.  
Fassett, Chas. Wood., Krug Park Pl.  
Ferguson, J. W., Commercial Bldg.  
Forgrave, H. S., King Hill Bldg.  
Forgrave, L. R., Logan Blk.  
French, J. A., 408 S. 8th St.  
Fulkerson, P. P., 6th & Francis St.  
Geiger, C. G., 613 Francis St.  
Geiger, Jacob, 613 Francis St.  
Gebhart, O. C., King Hill Bldg.  
Gleaves, O. G., 2624 St. Joseph.  
Goetz, W. F., 7th & Edmund St.  
Good, C. A., King Hill Bldg.  
Graham, J. K., Logan Bldg.  
Gray, A. L., Moss Bldg.  
Heddens, J. W., 614 Francis St.  
Hunterson, D. L., Parnell, Mo.  
Hunfreville, D. L., 513 Francis St.  
Islaub, J. W., 207 S. 14th St.  
Kenney, W. L., 6th & Felix St.  
Kessler, S. R., 202 N. 5th St.  
Lechtman, I., 310 S. 9th St.  
Lee, Herbert, Ballinger Bldg.  
Leonard, P. I., 613 Francis St.  
McGill, W. J., King Hill Bldg.  
McGlothlan, A. B., 6th & Felix St.  
Morton, Daniel, King Hill Bldg.  
Morrison, W. S., Rushville, Mo.  
Owens, F. C., Agency, Mo.  
Owens, J. F., Ballinger Bldg.  
Paul, T. M., 825 Fred Ave.  
Paulette, A. W., Hughes Bldg.  
Pitts, Barton, Pitts Bldg.  
Potter, T. E., 7th & Edmund St.  
Renaud, E. C., King Hill Building.  
Reynolds, J. B., 417 Francis St.  
Riley, J. B., Commercial Bldg.  
Sampson, Chris. M., 115 N. 5th St.  
Sampson, J. H., 115 N. 5th St.  
Senn, Geo., 9th & Jule St.  
Schmid, W. F., Pitts Bldg.  
Smith, B. H., Hosp. No. 2.  
Smith, J. C., Hosp. No. 2.  
Smith, S. D., 615 Francis St.  
Spencer, F. H., Moss Bldg.  
Thomas, C. E., Commercial Bldg.  
Thompson, G. R., Hosp. No. 2.  
Timerman, A. R., 4101½ Ill Ave.  
Todd, L. A., Logan Bldg.  
Toothaker, B. W., Hughes Bldg.  
Walker, H. L., 926 N. 3rd St.  
Wallace, C. H., Logan Blk.  
Wallis, W. M., Logan Bldg.  
Willman, R., 104 S. 3rd St.  
Woodson, C. R., Hosp. No. 2.

BUTLER COUNTY.

Cadwell, Victor, Poplar Bluff, Mo.  
Dewitt, Eskew, Poplar Bluff, Mo.  
Highfill, W. E., Neeleyville, Mo.  
Kendall, A. W., Poplar Bluff, Mo.  
Mott, J. W., Poplar Bluff, Mo.  
Norwine, J. J., Poplar Bluff, Mo.  
Seybold, Ira W., Poplar Bluff, Mo.  
Taylor, W. F., Poplar Bluff, Mo.  
Williamson, C. W., Poplar Bluff, Mo.  
Windsor, A., Poplar Bluff, Mo.  
Wright, C. O., Poplar Bluff, Mo.

CALDWELL COUNTY.

Brown, Tinsley, Hamilton, Mo.  
Cannon, J. W. M., Kidder, Mo.  
Carr, B. F., Polo, Mo.  
Cowley, G. B., Cowgill, Mo.  
Crawford, J. R., Kansas City, 1121 Cherry St.  
De Lamater, H., Kidder, Mo.  
Dewey, C. O., Breckenridge, Mo.  
Dodge, R. K., Polo, Mo.  
Dowell, G. S., Braymer, Mo.  
Dwight, K. M., Hamilton, Mo.  
Eads, L. J., Hamilton, Mo.  
Goins, G. W., Breckenridge, Mo.  
Leeper, C. C., Braymer, Mo.  
Lindley, W. T., Hamilton, Mo.  
Mount, R. L., Polo, Mo.  
McConkley, C. M., Mirabile, Mo.  
McMurtrey, Chas. I., Kidder, Mo.  
Schroeder, H. A., Braymer, Mo.  
Shouse, Wm. S., Kingston, Mo.  
Tiffin, Clayton, Hamilton, Mo.  
Waterman, J. A., Breckenridge, Mo.  
Wilhelm, D. E., Braymer, Mo.  
Wilkerson, J. O., Cowgill, Mo.  
Woldridge, H. L., Breckenridge, Mo.  
Woolsey, C. B., Braymer, Mo.

CALLAWAY COUNTY.

Baker, N. F., Fulton, Mo.  
Berry, J. W., Reform, Mo.  
Bridges, A. D., Portland, Mo.  
Christian, C. H., New Bloomfield, Mo.  
Crews, R. N., Williamsburg, Mo.  
Davis, J. R., Mokane, Mo.  
Gilman, D. C., Portland, Mo.  
Harrison, J. F., Fulton, Mo.  
Nichols, F. J., Hams Prairie, Mo.  
McCall, G. D., Fulton, Mo.  
McFarlane, W. W., Fulton, Mo.  
Roots, G. F., Tebbitts, Mo.  
Williams, P. E., Fulton, Mo.  
Yates, Martin, Fulton, Mo.  
Young, D. H., Fulton, Mo.

CAMDEN COUNTY

Claiborn, E. G., Decaturville, Mo.  
Clark, W. J., Linn Creek, Mo.  
Ford, J. S., Linn Creek, Mo.  
Hicks, E. S., Macks Creek, Mo.  
Mills, S., Macks Creek, Mo.  
Moore, G. M., Linn Creek, Mo.  
Moulder, G. A., Linn Creek, Mo.  
Myers, G. T., Macks Creek, Mo.  
Palmer, J. W., Climax Springs, Mo.

CAPE GIRARDEAU COUNTY.

Adkins, R. F., Jackson, Mo.  
Chostner, N. F., Dutchtown, Mo.  
Cunningham, H. L., Cape Girardeau, Mo.  
Dalton, A. E., Friedheim, Mo.  
Dalton, R. P., Cape Girardeau, Mo.  
Hays, W. B., Jackson, Mo.  
Hempstead, B. R., Cape Girardeau, Mo.  
Henderson, R. F., Cape Girardeau, Mo.  
Higdon, E. E., Allenville, Mo.  
Hope, D. H., Cape Girardeau, Mo.  
Howard, W. N., Cape Girardeau, Mo.  
Nettles, F., Cape Girardeau, Mo.  
Patton, W. C., Cape Girardeau, Mo.  
Porterfield, J. D. Jr., Cape Girardeau, Mo.  
Rosenthal, M., Cape Girardeau, Mo.  
Schultz, G. B., Cape Girardeau, Mo.



Statler, W. K., Oak Ridge, Mo.  
 Tralton, G. W., Cape Girardeau, Mo.  
 Vineyard, G. W., Jackson, Mo.  
 Walker, G. W., Cape Girardeau, Mo.  
 Whitmer, C. M., Marble Hill, Mo.  
 Wichterich, R. F., Cape Girardeau, Mo.  
 Wilson, E. H. G., St. Louis, Mo.  
 Woods, S. E., Jackson, Mo.

## CARROLL COUNTY

Baird, W. C. Bogard, Mo.  
 Brown, H., Bosworth, Mo.  
 Brunner, E. E., Carrollton, Mo.  
 Cook, R. F., Carrollton, Mo.  
 Edmunds, O. R., Tina, Mo.  
 Hollister, W. L., Wakenda, Mo.  
 Highsmith, G. R., Carrollton, Mo.  
 Lee, B. J., Norborne, Mo.  
 Miller, R. M., Bogard, Mo.  
 Samuels, L., Carrollton, Mo., R. F. D. No. 6.  
 Tull, H. W., Carrollton, Mo.

## CARTER-SHANNON COUNTY.

Chilton, J. A., Van Buren, Mo.  
 Cotton, T. W., Van Buren, Mo.  
 Fulton, Wm., Winona, Mo.  
 Gun, P. D., Birch Tree, Mo.  
 Hyde, Frank, Eminence, Mo.  
 Lucas, H. R., Chaffee, Mo.

## CASS COUNTY.

Adair, T. W., Archie, Mo.  
 Anderson, G. M., Pleasant Hill, Mo.  
 Barrett, W. H., Harrisonville, Mo.  
 Beckman, Wm. S., Strassburg, Mo.  
 Brierly, H. A., Peculiar, Mo.  
 Brierly, J. B., Gunn City, Mo.  
 Chaffin, W. F., Raymore, Mo.  
 Clemons, W. M., Cleveland, Mo.  
 Crawford, H. S., Harrisonville, Mo.  
 Dawson, B. E., Belton, Mo.  
 Elder, A. R., Harrisonville, Mo.  
 Ellis, F. B., Garden City, Mo.  
 Fair, S. W., Garden City, Mo.  
 Farrow, G. W., East Lynne, Mo.  
 Foster, F. W., East Lynne, Mo.  
 Gilham, E. M., Calumet, Okla.  
 Jerard, H., Pleasant Hill, Mo.  
 Keller, K. G., Freeman, Mo.  
 Prentiss, H. S., Pleasant Hill, Mo.  
 Overholser, M. P., Harrisonville, Mo.  
 Ramey, R. D., Garden City, Mo.  
 Schoor, A. H., Seattle, Wash., 921 12th Ave.  
 Schoor, E., Garden City, Mo.  
 Triplett, J. S., Harrisonville, Mo.  
 Wood, L. M., Pleasant Hill, Mo.  
 Yeager, R. P., Pleasant Hill, Mo.

## CEDAR COUNTY.

Alder, A. E., Cane Hill, Mo.  
 Brown, R. A., Stockton, Mo.  
 Crawford, R. O., El Dorado Springs, Mo.  
 Dawson, J. W., El Dorado Springs, Mo.  
 Dunnaway, L. T., Caplinger Mills, Mo.  
 Edgar, C. A., El Dorado Springs, Mo.  
 Gates, L. C., Jerico, Mo.  
 Hill, K., Eldorado Springs, Mo.  
 Holmes, A. T., Jerico, Mo.  
 Liston, E. H., Balm, Mo.  
 Liston, Geo. M., Forest Grove, Mo.  
 Marr, R. B., Filley, Mo.  
 Moore, W. A., El Dorado Springs, Mo.  
 White, E. E., Morris Ind. Ter.  
 Younger, T. B., Stockton, Mo.

## CHARITON COUNTY

Austin, M. B., Brunswick, Mo.  
 Billeter, W. J., Bynumville, Mo.  
 Brummall, J. D., Salisbury, Mo.  
 Brown, W. G., Triplett, Mo.  
 Baker, J. H. P., Salisbury, Mo.  
 Baker, W. L., Salisbury, Mo.  
 Edwards, G. W., Brunswick, Mo.  
 Epperly, R. G., Prairie Hill, Mo.  
 Gaines, J. R., Mussell Fork, Mo.  
 Hawkins, G. W., Triplett, Mo.  
 Hughes, B., Keytesville, Mo.

Jennings, C. A., Salisbury, Mo.  
 Knott, I., Keytesville, Mo.  
 Kirkpatrick, H. E., Dalton, Mo.  
 McAdam, J. D., Prairie Hill, Mo.  
 McEwen, Oliver, Shannondale, Mo.  
 Pitney, Orville, Forest Green, Mo.  
 Tatum, Harry C., Brunswick, Mo.  
 Temple, C. H., Rockford, Mo.  
 Wallace, J. S., Brunswick, Mo.  
 Welch, J. F., Salisbury, Mo.  
 Zilman, A. W., Indian Grove, Mo.

## CLARK COUNTY

Bridges, A. C., Kahoka, Mo.  
 Bridges, J. R., Kahoka, Mo.  
 Dickson, L. M., Revere, Mo.  
 Hiller, F. B., Kahoka, Mo.  
 Sisson, W. B., Kahoka, Mo.  
 Stewart, B. F., Revere, Mo.  
 Teel, A. W., Kahoka, Mo.

## CLAY COUNTY.

Allen, J. M., Liberty, Mo.  
 Ashley, M. A., Excelsior Springs, Mo.  
 Bogart, T. N., Excelsior Springs, Mo.  
 Cuthbertson, W. N., Liberty, Mo.  
 Fulton, F. H., Lathrop, Mo.  
 Gaines, J. J., Excelsior Springs, Mo.  
 Griffin, J. M., Excelsior Springs, Mo.  
 Jones, H. S., Linden, Mo.  
 Jones, J. L., Linden, Mo.  
 Lightfoot, F., Excelsior Springs, Mo.  
 Lowrey, Ernest, Excelsior Springs  
 Marsh, J. T., Liberty, Mo.  
 Mathews, F. H., Liberty, Mo.  
 Miller, E. H., Liberty, Mo.  
 McCullouch, G., Kearney, Mo.  
 Sevier, R. E., Liberty, Mo.  
 Suddarth, C. H., Smithville, Mo.  
 Ralph, A. B., Missouri City, Mo.  
 Rice, J. T., Excelsior Springs, Mo.  
 Rice, J. J., Kearney, Mo.  
 Rothwell, J. H., Liberty, Mo.  
 Rowell, H., Kearney, Mo.  
 Wallace, W. S., Excelsior Springs.  
 Ward, T. J., Birmingham, Mo.  
 Wilson, J. P., Liberty, Mo.  
 Wysong, W. L., Missouri City, Mo.

## CLINTON COUNTY.

Colley, E. A., Plattsburg, Mo.  
 Franklin, J. A., Cameron, Mo.  
 Kay, John, Perrin, Mo.  
 Rea, Robt. W., Plattsburg, Mo.  
 Rush, G. B., Lathrop, Mo.  
 Steckman, P. M., Plattsburg, Mo.  
 Sturgis, John, Perrin, Mo.  
 Winn, J. W., Plattsburg, Mo.

## COLE COUNTY

Bedford, S. V., Jefferson City, Mo.  
 Chastain, C. W., Jefferson City, Mo.  
 Clark, W. A., Jefferson City, Mo.  
 Enloe, C. F., Jefferson City, Mo.  
 Enloe, I. N., Jefferson City, Mo.  
 Ettmueller, G., Jefferson City, Mo.  
 Hamlin, C. W., Bass, Mo.  
 Hill, J. A., Jefferson City, Mo.  
 Hough, C. P., Jefferson City, Mo.  
 Lamkin, W. M., Jefferson City, Mo.  
 Leach, N. T., Elston, Mo.  
 Lopp, J. E., Jefferson City, Mo.  
 McAlester, A. W., Jefferson City, Mo.  
 Porth, J. R., Jefferson City, Mo.  
 Son, E. R., Jefferson City, Mo.  
 Thorpe, J. L., Jefferson City, Mo.

## COOPER COUNTY.

Allee, E. M., Bunceton, Mo.  
 Cochran, O. W., Gooch Hill, Mo.  
 Cordry, H. V., Boonville, Mo.  
 Elliott, W. H., Bunceton, Mo.  
 Evans, R. L., Boonville, Mo.  
 Fogle, R. L., Clifton City, Mo.  
 Hurt, P. L., Boonville, Mo.

Lionberger, J. R., Boonville, Mo.  
Mc Donald, H. A., Pishah, Mo.  
Meredith, A. L., Woodridge, Mo.  
Monroe, A. E., Otterville, Mo.  
Parish, J. S., Pleasant Green, Mo.  
Poindexter, J. W., Prairie Home, Mo.  
Quigg, H. D., Blackwater, Mo.  
Reynolds, W. H., Lupus, Mo.  
Rice, E. L., Otterville, Mo.  
Russell, G. A., Boonville, Mo.  
Smith, A. J., Boonville, Mo.  
Smiley, F. R., Boonville, Mo.  
Taylor, J. T., Speed, Mo.  
Teel, S. M., Prairie Home, Mo.  
Van Ravenswaay, C. H., Boonville, Mo.

DAVIES COUNTY.

Brosius, W. L., Gallatin, Mo.  
Clagett, O. F., Jamesport, Mo.  
Dunham, J. D., Pattonberg, Mo.  
Minnick, A. G., Locksprings, Mo.  
Songer, H. E., Jamesport, Mo.  
Smith, M. A., Gallatin, Mo.  
Waller, C. E., Altamont, Mo.  
Wetzel, N. M., Jameson, Mo.

DENT COUNTY

Brown, H. H., Condray, Mo.  
Craig, L. B., Salem, Mo.  
Cummings, W. P., Salem, Mo.  
Duncan, E. A., Salem, Mo.  
Gordon, J. B., Gila, Mo.  
Leonix, W. M., Hobson, Mo.  
McMurtrey, A. F., Salem, Mo.  
Pare, E. Y., Sligo, Mo.  
Rudd, W. E., Salem, Mo.  
Welch, J. C., Salem, Mo.

DUNKLIN COUNTY

Baldwin, Paul, Bennett, Mo.  
Bond, V. H., Cotton Plant, Mo.  
Bonewitz, John, Hornersville, Mo.  
Brown, C. W., Campbell, Mo.  
Birchett, J. G., Caldwell, Mo.  
Egbert, T. H., Kennett, Mo.  
Finney, W. B., Kennett, Mo.  
Harrison, A. S., Kennett, Mo.  
Johnson, G. L., Kennett, Mo.  
Kelley, N. F., Kennett, Mo.  
May, C. A., Campbell, Mo.  
Mobley, A. B., Kennett, Mo.  
Price, W. A., Campbell, Mo.  
Rigdon, T. J., Kennett, Mo.

FRANKLIN COUNTY.

Booth, H. A., Pacific, Mo.  
Briegleb, C. F., St. Clair, Mo.  
Brown, A. C., Moselle, Mo.  
Dunnigan, J. P., Sullivan, Mo.  
Eimbeck, Wm. F., New Haven, Mo.  
Hempker, W. H., Catawissa, Mo.  
Hume, E. L., Bourbon, Mo.  
Kitchell, W. E., St. Clair, Mo.  
Mattox, W. P., Sullivan, Mo.  
May, H. A., Washington, Mo.  
McMay, A. L., Pacific, Mo.  
Isbell, J., Washington, Mo.  
North, W. R., Labadie, Mo.  
Poppenhusen, H. A. C., Washington, Mo.  
Rusk, E. McD., Villa Ridge, Mo.  
Rush, J. A., Gray Summit, Mo.  
Smith, W. E., Catawissa, Mo.  
Trumpour, R. J., Spring Bluff, Mo.  
Schudde, O. N., Sullivan, Mo.  
Snow, A. E., Union, Mo.  
Stierberger, E. A., Union, Mo.  
Wyllie, S. D. B., Union, Mo.

GASCONADE-MARIES-OSAGE COUNTY.

Aufderheide, F., Drake, Mo.  
Burgess, J. W., Belle, Mo.  
Engelbrecht, Jno. Stony Hill, Mo.  
Ferrell, J. J., Owensville, Mo.  
Ferrell, W. R., Bland, Mo.

Fritts, O. C., Belle, Mo.  
Leach, C. T., Feurisville, Mo.  
Nieweg, J. W., Lois, Mo.  
Radamacker, J. J., Meta, Mo.  
Seba, J. D., Bland, Mo.  
Seba, W. E., Bland, Mo.  
Spurgeon, M. E., Red Bird, Mo.  
Terrell, S. J., Meta, Mo.

GENTRY COUNTY.

Barger, J. N., Darlington, Mo.  
Brookes, W. W., Stanberry, Mo.  
Conard, J. W., Albany, Mo.  
Hinkley, S. B., Stanberry, Mo.  
Lewis, Edwin, Stanberry, Mo.  
Lindley, E. R., Stanberry, Mo.  
Martin, W. T., Albany, Mo.  
Smith, G. W., Albany, Mo.  
Whitely, G. W., Albany, Mo.

GREENE COUNTY.

Barnes, G. W., Springfield, Mo.  
Bartlett, J. R., Springfield, Mo.  
Boyd, J. R., Springfield, Mo.  
Camp, W. A., Springfield, Mo.  
Coffelt, T. A., Springfield, Mo.  
Cowan, R. M., Springfield, Mo.  
Cox, Lee, Springfield, Mo.  
Farmsworth, D. B., Springfield, Mo.  
Fulbright, J. Harve., Springfield, Mo.  
Fulton, C. E., Springfield, Mo.  
Hill, H. S., Springfield, Mo.  
Hogg, Larrett, Springfield, Mo.  
James, W. C., Springfield, Mo.  
Knabb, Enoch, Springfield, Mo.  
Matthews, J. C., Springfield, Mo.  
Nixon, J. H., Springfield, Mo.  
Oldham, J. D., Springfield, Mo.  
Ormsbee, J. L., Springfield, Mo.  
Patterson, W. P., Springfield, Mo.  
Peake, O. L., Springfield, Mo.  
Purselley, W. L., Springfield, Mo.  
Ralston, J. P., Springfield, Mo.  
Ross, F. E., Springfield, Mo.  
Sherman, D. U., Elwood, Mo.  
Smith, W. M., Springfield, Mo.  
Tefft, J. E., Springfield, Mo.  
Terry, N. F., Springfield, Mo.  
Williams, J. W., Springfield, Mo.  
Woody, C. E., Springfield, Mo.

GRUNDY COUNTY.

Addington, W. H., Spickards, Mo.  
Allen, E., Hickory, Mo.  
Asher, J. A., Trenton, Mo.  
Cash, R. B., Spickards, Mo.  
Coon, D. W., Trenton, Mo.  
Davenport, R. G., Trenton, Mo.  
Elder, A. L., Trenton, Mo.  
Fulkerson, W. D., Trenton, Mo.  
Moore, G. A., Galt, Mo.  
Moore, T. E., Edinburgh, Mo.  
Pittman, W. T., Spickards, Mo.  
Sheldon, Samuel, Trenton, Mo.  
Stone, J. M., Laredo, Mo.  
Sutton, Bertha, Trenton, Mo.  
Sutton, N. E., Trenton, Mo.  
Webster, C. L., Trenton, Mo.  
Winningham, W. H., Trenton, Mo.  
Wright, J. B., Trenton, Mo.

HARRISON COUNTY.

Broyls, F. H., Bethany, Mo.  
Bryson, E. H., Bethany, Mo.  
Chipp, J. K., New Hampton, Mo.  
Eades, M. H., New Hampton, Mo.  
Gwinn, G. E., Bethany, Mo.  
Mitchell, C. A., Blythedale, Mo.  
Morroway, J. H., Ridgeway, Mo.  
Reynolds, A. C., Martinsville, Mo.  
Reynolds, E. M., Union Star, Mo.  
Robertson, C. H., Eagleville, Mo.  
Sellers, C. J., Mt. Moriah, Mo.  
Stewart, B. S., Bethany, Mo.  
Stoughton, E. L., Mt. Moriah, Mo.  
Sutton, B. M., Happy Valley, Mo.

Vandivert, A. H., Bethany, Mo.  
Walker, J., Bethany, Mo.  
Wiley, W. H., Ridgeway, Mo.  
Williams, A. W., Ridgeway, Mo.

## HENRY COUNTY.

Barr, B. B., Clinton, Mo.  
Beaty, J. G., Huntingdale, Mo.  
Benway, Wm. H., Deepwater, Mo.  
Britts, J. H., Clinton, Mo.  
Derwent, A. E., Clinton, Mo.  
Douglass, F. M., Clinton, Mo.  
Fewell, R. B., Montrose, Mo.  
Gibbins, Wm. H., Clinton, Mo.  
Gray, A. A., Calhoun, Mo.  
Haire, R. D., Clinton, Mo.  
Hampton, J. R., Clinton Ford, R. F. D.,  
Kemkler, J. E., Clinton, Mo.  
Mennees, G. W., Clinton, Mo.  
Head, G. W., Windsor, Mo.  
Miller, J. M., Montrose, Mo.  
Poague, S. A., Clinton, Mo.  
Russell, J. J., Deepwater, Mo.  
Shankland, W. M., Clinton, Mo.  
Tanner, W. C., Montrose, Mo.  
Wallis, J. R., Clinton, Mo.

## HOLT COUNTY.

Aiken, S. W., Oregon, Mo.  
Bickel, J. T., Winston, Mo.  
Bullock, F. E., Forest City, Mo.  
Chandler, J. F., Forest City, Mo.  
Davis, J. M., Craig, Mo.  
Davis, T. O., Maitland, Mo.  
Evans, C. L., Oregon, Mo.  
Gray, M. S., Craig, Mo.  
Gregory, W. S., Forbes, Mo.  
Hogan, F. E., Bigelow, Mo.  
Kaltenbach, E., Craig, Mo.  
Miller, E. M., Mound City, Mo.  
Miller, J. W., Mound City, Mo.  
Minton, J. R., Fortesque, Mo.  
Proud, W. C., Oregon, Mo.  
Juigley, B. T., Mound City, Mo.  
Simmons, B. B., Oregon, Mo.  
Tracy, J. M., Mound City, Mo.  
Tracy, J. C., Mound City, Mo.  
Williams, Ira, Maitland, Mo.

## HOWARD COUNTY.

Bonham, V. O., New Franklin, Mo.  
Champion, J. R., Hilldale, Mo.  
Fleet, J. B., New Franklin, Mo.  
Hume, J. Y., Armstrong, Mo.  
Lee, C. H., Fayette, Mo.  
Lewis, C. O., Fayette, Mo.  
Smith, N. E., Fayette, Mo.  
Thompson, W. S., Armstrong, Mo.  
Watts, C. W., Fayette, Mo.  
White, J. A., New Franklin, Mo.  
Williams, W. E., Myers, Mo.  
Wood, J. E., Harrisburg, Mo.  
Wright, U. S., Fayette, Mo.

## HOWELL COUNTY.

Black, J. D., South Fork, Mo.  
Bingham, J. W., Pottersville, Mo.  
Chandler, M. B., West Plains, Mo.  
Culp, J. C., Koshkonong, Mo.  
Davis, J. C. B., Willow Springs, Mo.  
Dixon, J. C. B., West Plains, Mo.  
Johnson, J. McB., West Plains, Mo.  
Mitchell, E. H., Pottersville, Mo.  
Nichols, D. J., West Plains, Mo.  
Powell, D. T., Thayer, Mo.  
Reiley, J. F., West Plains, Mo.  
Rowe, H. J., Willow Springs, Mo.  
Schuttee, H. C. W., West Plains, Mo.  
Spears, R. S., West Plains, Mo.  
Thompson, H. A., Lanton, Mo.  
Thornburg, A. H., West Plains, Mo.  
Wiles, W. J., Bakersfield, Mo.  
Williams, J. P., Willow Springs, Mo.

## JACKSON COUNTY.

(All addresses are Kansas City unless otherwise stated.)

Abrams, W. E. 523 Rialto Bldg.  
Adams, Noah, 317 Rialto Bldg.  
Anderson, H. C., 716 Shukert Bldg.  
Armour, Wallace, A., 3505 E. Twelfth St.  
Atkins, Calvin, Independence, Mo.  
Ayers, Samuel, 1208 Wyandotte.  
Barbee, C. M., 522 Rialto Bldg.  
Beattie, Thos. J., 603 Commerce Bldg.  
Beedle, G. A., 314 Altman Bldg.  
Beil, J. W., 805 McGee St.  
Bellows, G. E., 426 Rialto Bldg.  
Berry, G. F., 527 Rialto Bldg.  
Binnie, J. F., Twelfth & Wyandotte.  
Block, J., 502 Commerce Bldg.  
Bowman, Dora E., 327 Rialto Bldg.  
Bowman, J. W., 402 Hall Bldg.  
Brainard, B. F., Martin City, Mo.  
Brown, Chas. A. 311 Commerce Bldg.  
Brown, R. J., 1304 E. Twelfth St.  
Bruehl, J. 500 New Ridge Bldg.  
Brunig, F. H., 3137 Main St.  
Burkhart, E. A., 2309 Summitt St.  
Burke, C. L., 304 Deardorff Bldg.  
Burnett, S. G., 425 Rialto Bldg.  
Burrill, C. W., 623 Shukert Bldg.  
Callaghan, R., 540 Cambridge Ave.  
Campbell, W. L., Fifteenth & Jackson.  
Capell, C. S., 1107 McGee St.  
Carbaugh Eugene, 430 Rialto Bldg.  
Carl, S. T., 350 Ridge Bldg.  
Castelaw, R. E., 13 Woodworth Ave.  
Cathcart, C. P., 419 Deardorff Bldg.  
Chambers, J. Q., 705 Shukert Bldg.  
Chambliss, E. L., 523 Rialto Bldg.  
Child, Scott P., 705 Shukert Bldg.  
Clausen, J. J., 2311 Summitt Bldg.  
Clements, Jos., Nutley, N. Y.  
Coffey, W. H., 500 Bellefontaine  
Coffin, G. O., 500 New Ridge Bldg.  
Coleman, H. B., 3032 E. Eighteenth St.  
Cook, F. L., Blue Springs, Mo.  
Cooper, C. L., 4513 Independence Ave.  
Cordier, A. H., 310 Rialto Bldg.  
Cross, R. O., 317 Rialto Bldg.  
Cross, W. M., 1005 Campbell St.  
Crowder, W. H., 4647 Independence.  
Crowell, H. C., 410 Century Bldg.  
Cunningham, O. J., 305 Altman Bldg.  
Curry, E. R., 304 Deardorff Bldg.  
Curdy, R. J., 614 Commerce Bldg.  
Dailey, F. W., 327 Altman Bldg.  
Dannaker, C. A., 637 Woodland Ave.  
Davis, A. W., 3303 Woodland Ave.  
Davis, G. W., 407 Century Bldg.  
Donaldson, G. H., 200 West Port Ave.  
Donaldson, J. E., 200 Westport Ave.  
Dove, O. H., 413 Rialto Bldg.  
Drake, N. A., 1001 Harrison St.  
Dunham, S. A., 1302 Garfield Ave.  
Edmonson, M. M., 2440 Brooklyn Ave.  
Eldredge, J. S., 1021 Grand Ave.  
Evans, F. H., Fifth & Troost Ave.  
Eubank, A. E., 3021 South West Bl.  
Farney, H. M., Second & Wabash Ave.  
Fields, Tom, Eighteenth & Prospect Ave.  
Florian, A. J., Ninth & Holmes St.  
Foster, Hal, 402 Altman Bldg.  
Fowlston, John, 327 Shukert Bldg.  
Frankenburger, J. M., 534 Rialto Bldg.  
Freyman, A. A., 1201 Independence.  
Freyman, J., 1201 Independence.  
Frick, Wm. 301 Rialto Bldg.  
Frick, W. J., 311 Commerce Bldg.  
Fryer, B. E., 520 E. Ninth St.  
Fulton, A. L., 430 Deardorff Bldg.  
Fulton, C. M., 534 Altman Bldg.  
Gaines, J. W., 406 Rialto Bldg.  
Goldman, Max, 309 Century Bldg.  
Gosney, C. W., 718 Shukert Bldg.  
Greenlee, A. R., 3016 E. Eleventh St.  
Green, J. W., Independence, Mo.  
Griffith, J. D., 522 Rialto Bldg.  
Hall, C. L., Bryant Bldg.  
Hall, D. W., Bryant Bldg.



Hall, F. J., 288 Olive St.  
 Halley, George, Ridge Bldg.  
 Hamel, G. F., 706 W. Tenth St.  
 Hamilton, H. D., 1806 E. Thirty-first St.  
 Hanawalt, H. O., 1214 Main St.  
 Hanna, M. A., 2711 Brooklyn St.  
 Hardin, C. B., Rialto Bldg.  
 Harrison, A., Lee's Summit, Mo.  
 Harrison, E. Lee, 621 E. Thirtieth St.  
 Harrelson, N. O., Rialto Bldg.  
 Harrington, J. L., 1021 Grand Ave.  
 Hashinger G. H., Rialto Bldg.  
 Hays, H. C., 310 Century Bldg.  
 Hearst, A. L., 4521 Independence  
 Heller, H. L., 1208 Wyandotte Ave.  
 Henry, F. J., 2203 Brooklyn Ave.  
 Hertzler, A. E., 508 Altman Bldg.  
 Hetherington, E. M., Altman Bldg.  
 Hickerson, J. C., Independence Ave.  
 Hill, Howard, Rialto Bldg.  
 Holbrook, R. W., 224 Bryant Bldg.  
 Horigan, J. A., 3100 Main St.  
 Hoagland, W. L., 1221 E. Twenty-fourth St.  
 Hubbard, E. E., Rialto Bldg.  
 Hyde, B. C., 404 Brvant Bldg.  
 Irwin, C. B., 426 Ridge Bldg.  
 Iuen, F. J., 1334 Grand Ave.  
 Iuen, W. C., 1334 Grand Ave.  
 Jacobs, Ben., Altman Bldg.  
 Jackson, J. N., Rialto Bldg.  
 Jackson, C. A., Rialto Bldg.  
 James, S. C., Bryant Bldg.  
 Jennett, H. N., 4603 E. Ninth St.  
 Jerowitz, H. D., 1233 Grand Ave.  
 Jones, O. F., Rialto Bldg.  
 Jones, K. P., 1028 Walnut St.  
 Johnstone, P. A., Shukert Bldg.  
 Kanoky, J. P., 912 Walnut St.  
 Kepper, J. W., 720 Shukert Bldg.  
 King, G. A., 400 Altman Bldg.  
 King, W. E., 403 Commerce Bldg.  
 Kistler, J. R., 601 S. W. Blvd.  
 Kimberlin, J. W., 532 Altman Bldg.  
 Knox, Andrew C., 322 Altman Bldg.  
 Krimminger, C. E., Independence, Mo.  
 Kuhn, W. F., Farmington, Mo.  
 Kyger, J. W., 815 E. Thirty-first St.  
 Lahmer, Ira B., 1336 Broadway.  
 Lake, N. E., Fourteenth & Summitt.  
 Lane, H. H., 800 S. W. Blvd.  
 Langsdale, J. M., Altman Bldg.  
 Laning, J. R., 623 Shukert Bldg.  
 Lauranzana, Louis, Fifth & Cherry St.  
 Leverich, Leslie, Twelfth & Brooklyn Ave.  
 Leonard, H. O., 521 Shukert Bldg.  
 Leonard, W. H., 601 S. W. Blvd.  
 Lester, Chas. H., Bryant Bldg.  
 Lee, R. H., 3409 Wyandotte St.  
 Lewis, Ned. O., Fourteenth & Grand Ave.  
 Lewis, J. K., 1212 Wyandotte Ave.  
 Lewis, Nannie P., 1219 Wyandotte Ave.  
 Lichtenberg, Jos., 1209 Wyandotte.  
 Lieberman, B. A., 1107 McGee Ave.  
 Logan, J. E., 1229 Wyandotte Ave.  
 Look, H. H., 428 Altman Bldg.  
 Loyd, O. H., Oak Grove, Mo.  
 Lusher, L. W., Twelfth & Grand Ave.  
 Lyle, H. M., 523 Altman Bldg.  
 Mallett, Eugene P., Twelfth & Wyandotte.  
 McCall, H. B., Twelfth & Main St.  
 McCandless, O. H., 305 Altman Bldg.  
 McCrea, Maggie L., 526 Ridge Bldg.  
 McDonald, Chet., Rialto Bldg.  
 McDonald, P. L., 527 Rialto Bldg.  
 McKee, J. W., Rialto Bldg.  
 McQuade, H. D., 435 New Ridge Bldg.  
 McVey, Newton, Rialto Bldg.  
 Manahan, H. J., 534 Rialto Bldg.  
 Manko, E., Twelfth & Central St.  
 Mann, A. W., Oak Grove, Mo.  
 Mark, E. G., 1208 Wyandotte Ave.  
 Martin, H. L., 601 Twelfth St.  
 Martin, J. C., 3026 W. 23rd St.  
 Merriman, C. S., 2511 Forest Ave.  
 Middleton, James, 412 N. Mongall Ave.  
 Miller, Abram, Rialto Bldg.  
 Miller, Hugh, 1021 Grand Ave.  
 Montgomery, W. E., Rialto Bldg.

Moennighoff, F. J., Rialto Bldg.  
 Morrow, C. J., Bryant Bldg.  
 Morrow, W. F., Altman Bldg.  
 Morris, W. C., 315 Garfield Ave.  
 Mosher, G. C., Bryant Bldg.  
 Mott, J. S., Rialto Bldg.  
 Murphy, F. E., Deardorff Bldg.  
 Neff, F. C., Altman Bldg.  
 Newhouse, Stanley, 452 Ridge Bldg.  
 Norberg, G. B., 526 Altman Bldg.  
 O'Connor, C., 815 McGee St.  
 O'Donnell, A., 327 Altman Bldg.  
 Owens, M. J., 603 S. W. Blvd.  
 Pearse, H. E., Rialto Bldg.  
 Parker, O. H., Twelfth & Central St.  
 Perkins, J. W., Altman Bldg.  
 Pettijohn, N. J., 1310 Tracy Ave.  
 Pickerill, C. W., 401 Rialto Bldg.  
 Pinckard, C. G., Eighth & Campbell St.  
 Phillips, E. T., 1019 Broadway.  
 Porter, A. L., Rialto Bldg.  
 Porter, D. R., Tenth & Washington Ave.  
 Punton, John, Altman Bldg.  
 Ralston, J. H., 1800 W. Twenty-ninth St.  
 Rathbone, F. W., Rialto Bldg.  
 Reed, W. M., Rialto Bldg.  
 Reyling, F. T., 119 Troost Ave.  
 Rice, Wm., 402 Hall Bldg.  
 Richardson, K. B., Ridge Bldg.  
 Ridge, I. M., Ridge Bldg.  
 Riegle, D. H., Twelfth & Summitt St.  
 Ritter, C. A., Altman Bldg.  
 Roberts, C. F., 720 Shukert Bldg.  
 Robertson, J. A., 705 Shukert Bldg.  
 Robinson, E. F., Bryant Bldg.  
 Robinson, J. L., Altman Bldg.  
 Rogers, J. C., Rialto Bldg.  
 Rosenwald, Leon, Rialto Bldg.  
 Rowe, W. G., Blue Springs, Mo.  
 Russell, E. L., 805 Altman Bldg.  
 Sams, W. M., 806 Independence  
 Sanders, F. L., 517 Shukert Bldg.  
 Sanders, St. Elmo, Rialto Bldg.  
 Sandzen, Carl, Rialto Bldg.  
 Sawyer, J. F., Fifth & Ledie Ave.  
 Schauffler, E. W., Deardorff Bldg.  
 Schauffler, R. McE., Deardorff Bldg.  
 Schutz, W. H., Bryant Bldg.  
 Scott, A. J., Ridge Bldg.  
 Scott, J. N., Ridge Bldg.  
 Sexton, M. P., Century Bldg.  
 Sheley, O. C., Independence, Mo.  
 Shelton, W. A., 331 Shukert Bldg.  
 Sherer, J. W., 1208 Wyandotte Ave.  
 Shumate, D. L., 516 Shukert Bldg.  
 Singleton, J. M., Fifteenth & Troost Ave.  
 Skinner, E. H., 207 Commerce Bldg.  
 Sloan, R. T., Rialto Bldg.  
 Smith, A. E., University Bldg.  
 Smith, R. M., 203 E. Twelfth St.  
 Stephens, N. A., 813 E. Thirty-first St.  
 St. Clair, R. L., 115 Hardesty Ave.  
 Stevens, W. W., Greenwood, Mo.  
 Stewart, E. L., 521 Shukert Bldg.  
 Streett, St. Clair, 123 W. Twelfth St.  
 Strother, J. S., 311 Commerce Bldg.  
 Swaney, Loren, Hickman Mills, Mo.  
 Talbot, Ambrose, Rialto Bldg.  
 Taylor, L. G., 720 Woodland Ave.  
 Tesson, N. A. G., 332 Shukert Bldg.  
 Thomas, A. W., Springfield, Mo.  
 Thompson, G. B., Twelfth & Central Bl.  
 Thompson, James, Rialto Bldg.  
 Thompson, J. H., Deardorff Bldg.  
 Thornton, T. R., Lee's Summit, Mo.  
 Thrailkill, E. H., Rialto Bldg.  
 Tiffany, F. B., 805 McGee St.  
 Trimble, W. K., 2742 Holmes St.  
 Tureman, H. G., 702 Commerce Bldg.  
 Twyman, G. T., Independence, Mo.  
 Van Eman, F. T., 415 Argyle Bldg.  
 Von Quast, Ernst, Century Bldg.  
 Wall, A. H., 3839 Independence  
 Watson, B. F., Rialto Bldg.  
 Wever, J. S., 503 Bryant Bldg.  
 Welch, A. J., Twenty-ninth & S. W. Blvd.  
 Wedding, E. V., Fifth & Brooklyn Ave.  
 Weiss, F. H., 415 Deardorff Bldg.

Willits, W. C., Rialto Bldg.  
 Wheeler, B. H., 324 Deardorff Bldg.  
 Wheeler, W. S., Twelfth & Grand Ave.  
 Wilson, A. M., 906 Main St.  
 Wilson, Dora G., University Bldg.  
 Wilson, John, 720 Shukert Bldg.  
 Wolf, I. J., Rialto Bldg.  
 Wood, D. L., 4 East Tenth St.  
 Wood, N. P., Independence, Mo.  
 Woolley, P. V., 914 Harrison St.  
 Zwart, B. H., 1019 Prospect Ave.

## JASPER COUNTY.

Anderson, F. L., Joplin, Mo.  
 Bachelder, F. S., Asbury, Mo.  
 Balsley, M. T., Joplin, Mo.  
 Blackerby, P. E., Joplin, Mo.  
 Blackwell, Z. T., Joplin, Mo.  
 Clark, J. W., Carterville, Mo.  
 Cummings, C. C., Joplin, Mo.  
 Freeman, A. B., Joplin, Mo.  
 Grantham, S. A., Joplin, Mo.  
 Haas, H. R., Joplin, Mo.  
 Hill, D. R., Joplin, Mo.  
 James, R. M., Joplin, Mo.  
 Kelso, R. S., Joplin, Mo.  
 Ketcham, C. M., Carthage, Mo.  
 Kincheloe, M. B., Joplin, Mo.  
 Lanyon, W. H., Joplin, Mo.  
 McClure, G. W., Carterville, Mo.  
 Matthews, L. I., Joplin, Mo.  
 Miller, G. W., Joplin, Mo.  
 Miller, S. H., Joplin, Mo.  
 Neff, R. L., Joplin, Mo.  
 Newman, J. D., Joplin, Mo.  
 Pifer, J. D., Joplin, Mo.  
 Shelton, M. C., Joplin, Mo.  
 Snyder, A. R., Joplin, Mo.  
 Spriggs, M. L., Joplin, Mo.  
 Steele, W. E., Carthage, Mo.  
 Woolfe, B. F., Carthage, Mo., R.F.D., No.1.

## JEFFERSON COUNTY.

Bryan, G. G., De Soto, Mo.  
 Donell, J. F., Festus, Mo.  
 Elders, H. W., De Soto, Mo.  
 Farrar, G. W., DeSoto, Mo.  
 Gibson, W. E., De Soto, Mo.  
 Hamel, A. H., De Soto, Mo.  
 Harris, C. G., Festus, Mo.  
 Hull, W. W., Sulphur Springs, Mo.  
 Jones, J. E., Hillsboro, Mo.  
 McNutt, I. N., Pevely, Mo.  
 Pickel, J. W., Crystal City, Mo.

## JOHNSON COUNTY.

Aber, W. H., Montserrat, Mo.  
 Adcock, D. C., Warrensburg, Mo.  
 Adcock, J. A. B., Warrensburg, Mo.  
 Anderson, J. I., Warrensburg, Mo.  
 Anderson, J. T., Warrensburg, Mo., R.F.D.  
 Bozarth, John A., Centerview, Mo.  
 Bradley, T. L., Warrensburg, Mo.  
 Case, Z., Warrensburg, Mo.  
 Gilbert, E. H., Warrensburg, Mo.  
 Graves, E. A., Kingsville, Mo.  
 Hall, O. B., Warrensburg, Mo.  
 Johnson, W. E., Warrensburg, Mo.  
 Murray, L. F., Holden, Mo.  
 Ozias, C. O., Warrensburg, Mo.  
 Porter, J. E., Knobnoster, Mo.  
 Parks, Henry, Dunksburg, Mo.  
 Rice, J. M., Columbia, Mo.  
 Shy, M. P., Knobnoster, Mo.  
 Schofield, L. J., Warrensburg, Mo.  
 Schooley, R. C., Robins, Mo.  
 Tilton, A. L., Truxton, Arizona.  
 Thompson, W. G., Holden, Mo.

## KNOX COUNTY.

Arnett, A., Novelty, Mo.  
 Brown, G. S., Edina, Mo.  
 Brown, L. S., Edina, Mo.  
 Jurgens, H. J., Edina, Mo.  
 Luman, F. E., Baring, Mo.  
 Myers, J., Greensburg, Mo.

Northcutt, J. R., Knox City, Mo.  
 O'Connor, W. F., Baring, Mo.  
 St. John, H. H., Edina, Mo.  
 Wilson, R. E., Labelle, Mo.

## LACLEDE COUNTY.

Barker, J. C., Russ, Mo.  
 Billings, J. M., Lebanon, Mo.  
 Herbert, T. B., Lebanon, Mo.  
 Jacobs, J. M., Conway, Mo.  
 Lindsey, J. A., Orla, Mo.  
 Lockwood, W. A., Conway, Mo.  
 McComb, J. A., Lebanon, Mo.  
 McComb, Jas., Lebanon, Mo.  
 Perkins, J. M., Lebanon, Mo.  
 Pinckard, J. A., Lebanon, Mo.  
 Pritchett, P. L., Lebanon, Mo.

## LAFAYETTE COUNTY.

Barclay, R. D., Odessa, Mo.  
 Braecklein, W. A., Higginsville, Mo.  
 Carthrae, Lewis, Cordee, Mo.  
 Cope, J. Q., Lexington, Mo.  
 Crank, A. C., Odessa, Mo.  
 Fredendall, G. W., Lexington, Mo.  
 Fulkerson, J. J., Lexington, Mo.  
 Gaines, E. F., Bates City, Mo.  
 George, J. H., Odessa, Mo.  
 Harwood, W. G., Dover, Mo.  
 Mann, F. W., Wellington, Mo.  
 McGinnis, F., Higginsville, Mo.  
 O'Neal, W. C., Waverly, Mo.  
 Perrie, J., Mayview, Mo.  
 Ramsey, C. F., Dover, Mo.  
 Ryland, C. T., Lexington, Mo.  
 Schneider, J. A., Concordia, Mo.  
 Tucker, J. E., Lexington, Mo.  
 Webb, W. C., Higginsville, Mo.  
 Williams, H., Odessa, Mo.

## LAWRENCE COUNTY.

Andrew, J. P., Marionville, Mo.  
 Baird, Jessie P., Marionville, Mo.  
 Burney, W. S., Miller, Mo.  
 Cottingham, I. A., Aurora, Mo.  
 Craven, J. H., Marionville, Mo.  
 Fleming, J. B., Aurora, Mo.  
 Goodrich, E. E., Crane, Mo.  
 Harris, J. A., Mt. Vernon, Mo.  
 Hoffman, D. M., Crane, Mo.  
 Holmes, W. M., Chesapeake, Mo.  
 King, C. R., Stotts City, Mo.  
 McCall, T. D. S., Marionville, Mo.  
 Madry, A. H., Aurora, Mo.  
 Melton, J. A., Aurora, Mo.  
 Mitchell, D. L., Cassville, Mo.  
 Moore, C. A., Aurora, Mo.  
 Painter, J. M., Mt. Vernon, Mo.  
 Rodman, W. W., Pierce City, Mo.  
 Roseberry, E. C., Mt. Vernon, Mo.  
 Shelton, C. W., Mt. Vernon, Mo.

## LINCOLN COUNTY.

Avery, C. D., Troy, Mo.  
 Beatty, J. D., Troy, Mo.  
 Duwelins, L. H., Briscoe, Mo.  
 Hicks, E. A., Old Monroe, Mo.  
 McKay, S. R., Troy, Mo.  
 Pendleton, L., Troy, Mo.  
 Smith, W. P., Troy, Mo.  
 Stanley, J. T., Winfield, Mo.  
 Strickland, J. R., Moscow Mills, Mo.

## LINN COUNTY.

Buck, U. G., Rothville, Mo.  
 Burke, F. W., Laclede, Mo.  
 Burke, J. L., Laclede, Mo.  
 Cantwell, J. L., Bucklin, Mo.  
 Cochran, F. B., Brookfield, Mo.  
 Dryden, U. G., Purden, Mo.  
 Eure, J. B., Brookfield, Mo.  
 Fore, T. P., Brookfield, Mo.  
 Haley, Robt., Brookfield, Mo.  
 Howard, D. F., Brookfield, Mo.  
 Jenkins, C. E. B., Brookfield, Mo.  
 Knott, A. W., Marceline, Mo.  
 Lane, J. W., Linneus, Mo.

Mason, J. W., Brookfield, Mo.  
 Morris, Robt. H., Linneus, Mo.  
 Musgrove, W. H., Eversonville, Mo.  
 Oven, T. P., Brookfield, Mo.  
 Perrin, J. H., Marceline, Mo.  
 Polson, J. T., Laclede, Mo.  
 Putnam, B. B., Marceline, Mo.  
 Putnam, Ola, Marceline, Mo.  
 Riding, O. H., Meadville, Mo.  
 Stanley, Z. T., Laclede, Mo.  
 Standly, Kathryn V., Brookfield, Mo.  
 Standly, E. D., Linneus, Mo.  
 Stephenson, J. T., Tina, Mo.  
 Stratton, C. D., Rothville, Mo.  
 Thompson, J. M., Meadville, Mo.  
 Trippier, Bert, Browning, Mo.

LIVINGSTON COUNTY.

Alexander, G. W., Chula, Mo.  
 Batdorff, F. P., Farmersville, Mo.  
 Barney, R., Chillicothe, Mo.  
 Beeman, S. M., Chillicothe, Mo.  
 Carver, H. N., Kansas City, Mo.  
 Chaffin, R. E., Avalon, Mo.  
 Cherrington, J. F., Denver, Colo.  
 Cobbell, E. H., Chillicothe, Mo.  
 Gibson, H. C., Mooresville, Mo.  
 Gordon, David, Chillicothe, Mo.  
 Girdner, Wm. M., Chillicothe, Mo.  
 Grace, H. M., Chillicothe, Mo.  
 Houf, W., Farmersville, Mo.  
 Murray, R. W., Dawn, Mo.  
 Ogan, E. F., Chula, Mo.  
 Piatt, S. K., Chillicothe, Mo.  
 Simpson, A. J., Chillicothe, Mo.  
 Stevens, B. N., Chillicothe, Mo.  
 Swope, W. A., Wheeling, Mo.  
 Tracy, L. E., Chillicothe, Mo.  
 Trimble, J. W., Wheeling, Mo.  
 White, W. L., Springhill, Mo.

MACON COUNTY.

Allen, F. W., Callao, Mo., R. F. D.  
 Bradley, W. E., Ethel, Mo.  
 Brewington, G. F., Bevier, Mo.  
 Bunch, B. F., Bloomington, Mo.  
 Campbell, J. F., La Platte, Mo.  
 Clements, E. B., Macon, Mo.  
 Drew, F. W., Ethel, Mo.  
 Forster, J. P., Lacrosse, Mo.  
 Hunt, J. R., Ardmore, Mo.  
 Mason, L. O., Bevier, Mo.  
 Milam, B. J., Macon, Mo.  
 Miller, A. B., Macon, Mo.  
 Miller, W. H., Macon, Mo.  
 Naylor, O., Atlanta, Mo.  
 Norris, T. J., Macon, Mo.  
 Pipkin, W. D., Excello, Mo.  
 Raines, A. M., Ten-Mile, Mo.  
 Reagan, C. W., Macon, Mo.  
 Salyer, C. E., Callao, Mo.  
 Schwab, B. C., Ardmore, Mo.  
 Smith, C. W., Keota, Mo.  
 Smith, E. S., Macon, Mo.  
 Southern, J. N., Atlanta, Mo.  
 Tainter, P. R., Callao, Mo.  
 Trippier, F. L., College Mound, Mo.  
 Thompson, L. M., Macon, Mo.  
 Webb, W. E., Macon, Mo.  
 Welch, W. A., Callao, Mo.

MADISON COUNTY

Anthony, C. A., Fredericktown, Mo.  
 Banon, Harry, Mine Lamotte, Mo.  
 Cozzen, E. P., Fredericktown, Mo.  
 Davis, C. U., Fredericktown, Mo.  
 Dines, G. L., Mine Lamotte, Mo.  
 Gale, F. W., Marquand, Mo.  
 Greenwood, G. W., Fredericktown, Mo.  
 Haley, O., Fredericktown, Mo.  
 Slaughter, S. C., Fredericktown, Mo.  
 Smith, J. K., Fredericktown, Mo.

MARION COUNTY.

Banks, H. L., Hannibal, Mo.  
 Baskett, J. N., Hannibal.  
 Bounds, E. H., Hannibal, Mo.  
 Bourn, J. J., Hannibal, Mo.

Bush, F. W., Hannibal, Mo., R.F.D.  
 Chilton, J. C., Hannibal, Mo.  
 Chowning, Thos., Hannibal, Mo.  
 Coons, J. N., Hannibal, Mo.  
 Detweiler, A. J., Hannibal, Mo.  
 Farrell, J. J., Hannibal, Mo.  
 Goodier, Robt. H., Hannibal, Mo.  
 Guss, W. C., Hannibal, Mo.  
 Hays, W. H., Hannibal, Mo.  
 Hornback, E. T., Hannibal, Mo.  
 Howell, J. S., Hannibal, Mo.  
 Kabler, P. L., Hannibal, Mo.  
 Primm, J. N., Hannibal, Mo.  
 Reid, J., Hannibal, Mo.  
 Schmidt, R., Hannibal, Mo.  
 Shanks, A. L., Hannibal, Mo.  
 Smith, U. S., Hannibal, Mo.  
 Vandiver, C. E., Hannibal, Mo.  
 Waldo, E. E., Hannibal, Mo.

MERCER COUNTY.

Bristow, G. M., Princeton, Mo.  
 Buren, C. R., Princeton, Mo.  
 Chesmore, H. P., Princeton, Mo.  
 Nally, H., Cainsville, Mo.  
 Perry, J. M., Princeton, Mo.

MILLER COUNTY.

Allee, W. L., Eldon, Mo.  
 Allee, W. S., Olean, Mo.  
 Brockman, H. H., Eldon, Mo.  
 DeVilbiss, F., Spring Garden, Mo.  
 Dickson, W. D., Tuscombina, Mo.  
 Gilleland, J. L., Olean, Mo.  
 Hickman, S. P., Ulman, Mo.  
 Kouns, D. H., Tuscombina, Mo.  
 Mace, G. R., Iberia, Mo.  
 Temple, J. W., Eldon, Mo.  
 VanGrempp, W. A., Iberia, Mo.  
 Walker, G. D., Eldon, Mo.

MISSISSIPPI COUNTY.

Boggan, P. P., East Prairie, Mo.  
 Chapman, A. W., Charleston, Mo.  
 Davis, J. S., Whiting, Mo.  
 Hamner, M. D., Bertrand, Mo.  
 Howle, W. P., Charleston, Mo.  
 Lynch, J. W., Charleston, Mo.  
 Martin, A. L., East Prairie, Mo.  
 Ogilvie, R. K., Charleston, Mo.  
 Reid, H. L., Charleston, Mo.  
 Wallace, G. R., Bertrand, Mo.

MONITEAU COUNTY.

Bramel, H. W., McGirk, Mo.  
 Burke, J. P., California, Mo.  
 Crum, J. A., Marion, Mo.  
 Dearing, W. A., Jamestown, Mo.  
 Freudenberger, H., Centertown, Mo.  
 English, J. E., Bacon, Mo.  
 Klueber, H. C., California, Mo.  
 Latham, H. W., Latham, Mo.  
 Latham, L. L., Latham, Mo.  
 Marsh, J. W., Tipton, Mo.  
 Norman, J. B., California, Mo.  
 Patterson, W. R., Tipton, Mo.  
 Popejoy, H. R., High Point, Mo.  
 Robertson, J. M., Latham, Mo.  
 Stewart, J. B., Clarksburg, Mo.  
 Thorpe, A. V., Jamestown, Mo.  
 Wilson, G. S., Fortuna, Mo.

MONROE COUNTY.

Baker, Chas., Sante Fe, Mo.  
 Bell, W. T., Stoutville, Mo.  
 Brown, S. M., Monroe City, Mo.  
 Brown, J. E., Florida, Mo.  
 Carver, F. H., Madison, Mo.  
 Cassity, G. H., Tulip, Mo.  
 Dixon, C. H., Holliday, Mo.  
 Duncan, Edward, Long Branch, Mo.  
 Ely, A. E., Monroe City, Mo.  
 Johnson, G. A., Holliday, Mo.  
 Lenslev, M. E., Madison, Mo.  
 Lloyd, T. B., Paris, Mo.  
 McMurry, M. C., Paris, Mo.



McNutt, W. R. A., Monroe City, Mo.  
 Moss, F. M., Paris, Mo.  
 Payne, H. G., Paris, Mo.  
 Shobe, H. G., Paris, Mo.

## MORGAN COUNTY.

Beale, J. T., Versailles, Mo.  
 Gunn, A. J., Versailles, Mo.  
 Hatler, W. L., Barnett, Mo.  
 Kelly, R. Q., Versailles, Mo.  
 Lutman, H. M., Versailles, Mo.  
 Short, J. S., Versailles, Mo.  
 Weist, C. A., Stover, Mo.  
 Woods, P. G., Versailles, Mo.

## NODAWAY COUNTY.

Allen, A. B., Maryville, Mo.  
 Anthony, F. R., Maryville, Mo.  
 Barnett, A. D., Guilford, Mo.  
 Bradbury, R. M., Maryville, Mo.  
 Crowson, E. L., Pickering, Mo.  
 Crowson, Egbert, Gaynor City, Mo.  
 Day, Hiram, Parnell, Mo.  
 Dean, J. W., Maryville, Mo.  
 Dean, L. E., Maryville, Mo.  
 Dowell, H. S., Clearmont, Mo.  
 Elder, E. C., Maryville, Mo.  
 Ellis, C. A., Maryville, Mo.  
 Goodson, H. C., Hopkins, Mo.  
 Heryford, W. B., Pickering, Mo.  
 Howell, C. F., Bedison, Mo.  
 Johns, Gomer, Wilcox, Mo.  
 Kessler, O. C., Ravenwood, Mo.  
 Koch, C. D., Maryville, Mo.  
 Kummins, K. C., Maryville, Mo.  
 Large, S. D., Hopkins, Mo.  
 Larrabee, J. A., Barnard, Mo.  
 McClanahan, G. N., Guilford, Mo.  
 Molzahn, E. T., Ravenwood, Mo.  
 Nash, G. A., Maryville, Mo.  
 Pierpoint, J. E., Skidmore, Mo.  
 Pollard, D. A., Barnard, Mo.  
 Pollard, M. M., Barnard, Mo.  
 Robinson, J. B., Quitman, Mo.  
 Sayler, H. L., Elmo, Mo.  
 Smith, D. G., Arkoe, Mo.  
 Stuckle, W. P., Clyde, Mo.  
 Todd, J. H., Maryville, Mo.  
 Wallis, W. M., Maryville, Mo.  
 Wallis, F. C., Maryville, Mo.  
 Wood, W. S., Elmo, Mo.

## NEW MADRID COUNTY.

Atkisson, J. A., Moorehouse, Mo.  
 Bell, J. B., Moorehouse, Mo.  
 Digges, W. L., New Madrid, Mo.  
 Hart, J. W., Moorehouse, Mo.  
 Hollenbeck, J., Portageville, Mo.  
 O'Bannon, W., New Madrid, Mo.  
 Sparhawk, W. J., Marston, Mo.  
 Timmermann, J. H., Marston, Mo.  
 Watson, C. W., New Madrid, Mo.  
 Williams, J. J., New Madrid, Mo.  
 Williams, R. L., Point Pleasant, Mo.

## NEWTON COUNTY.

Benton, A. W., Neosho, Mo.  
 Bowers, H., Neosho, Mo.  
 Bridges, J. M., Tipton Ford, Mo.  
 Brown, W. D., Newtonia, Mo.  
 Campbell, Wm., Seneca, Mo.  
 Chapman, U. S., Diamond, Mo.  
 Cravens, W. A., Granby, Mo.  
 Doty, E. G., Anderson, Mo.  
 Foster, H. F., Neosho, Mo.  
 Hancock, J. B., Newtonia, Mo.  
 Harrison, G. W., Newtonia, Mo.  
 Hodges, J. J., Granby, Mo.  
 Lamson, J. W., Neosho, Mo.  
 Lamson, R. C., Neosho, Mo.  
 Langley, J. W., Granby, Mo.  
 Maas, A., Neosho, Mo.  
 Porter, H. L., Seneca, Mo.  
 Roseberry, E. M., Neosho, Mo.  
 Vancleave, C. T., Neosho, Mo.  
 Weems, D. L., Neosho, Mo.  
 Wills, R. L., Neosho, Mo.

## PEMISCOT COUNTY.

Bugg, A. F., Pascola, Mo.  
 Crowe, B. D., Caruthersville, Mo.  
 Conard, A. R., Caruthersville, Mo.  
 Cooper, T. S., Steele, Mo.  
 Hendrix, M. B., Caruthersville, Mo.  
 Hudgings, M. H., Caruthersville, Mo.  
 Luten, J. B., Caruthersville, Mo.  
 Granger, G. A., Steele, Mo.  
 Johnson, J. W., Hayti, Mo.  
 Martin, Chas. E., Caruthersville, Mo.  
 Tipton, O. A., Cottonwood Point, Mo.  
 Tipton, P. L., Cooter, Mo.  
 Turley, Otto, Steele, Mo.

## PETTIS COUNTY.

(All addresses are Sedalia, Mo., unless otherwise stated.)

Albers, E. A., Smithton, Mo.  
 Bishop, W. T., Hughesville, Mo.  
 Bohling, C., 5th and Ohio.  
 Campbell, A. J., 301 Ohio.  
 Cartwright, C. P., Sedalia, R.F.D., No. 1.  
 Clabough, O. W., Greenridge, Mo.  
 Cole, H. B., 501 S. Engineer.  
 Cole, W. M., 501 S. Engineer.  
 Collins, M. T., 219 Ilgenfritz Bldg.  
 Cowan, W. G., 504 S. Ohio.  
 Dunlap, W. O., 108 West Main St.  
 Dyer, David P., Dresden, Mo.  
 Evans, W. H., Beamman, Mo.  
 Ferguson, L., Green Ridge, Mo.  
 Ferguson, W. J., 321 Ohio.  
 Harris, B. M., Georgetown, Mo.  
 Hite, H. A., Greenridge, Mo.  
 Hubbard, J. D., Versailles, Mo.  
 Kelly, Sam., Ilgenfritz Bldg.  
 Knott, Minerva, E. 7th St.  
 Love, J. G., M. K. & T. Hospital.  
 McNeil, C. A., M. K. & T. Hospital.  
 McNeil, G. E., M. K. & T. Hospital.  
 Martin, J. G., 700 East Broadway.  
 Mitchel, J., Lookout, Mo.  
 Morley, R. R., 1103 E. 5th St.  
 Overstreet, W. C., 312 S. Ohio.  
 Parkhurst, C. L., Houstonia, Mo.  
 Prowell, J. D., Longwood, Mo.  
 Sands, M. L., Cole Camp, Mo.  
 Simonds, Wallace, 418 S. Ohio.  
 Sutton, F. L., Hoffman Bldg.  
 Shirk, W. S., Hoffman Bldg.  
 Tittsworth, G., 508 S. Ohio St.  
 Trader, J. W., 5th and Ohio.  
 Tucker, A. J., 401 S. Ohio.  
 Tyler, R. S., Dunsburg, Mo.  
 Vancey, E. F., M. K. & T. Hospital.  
 Wood, E. A., Hoffman Bldg.

## PHELPS COUNTY.

Baysinger, S. L., Rolla, Mo.  
 Burns, W. F., Newburg, Mo.  
 Breuer, W. H., St. James, Mo.  
 Cowan, R. B., Edgar Springs, Mo.  
 Gowin, O. G., St. James, Mo.  
 Johnson, R. L., Rolla, Mo.  
 Rowe, S. B., Rolla, Mo.  
 Short, N. J., Rolla, Mo.  
 Smith, B. T., Newburg, Mo.  
 Fulbright, C. H., St. James, Mo.

## PLATTE COUNTY.

Barr, A. C., Linkville, Mo.  
 Benham, C. E., Parkville, Mo.  
 Chastain, C. H., Weston, Mo.  
 Clark, H. M., Platte City, Mo.  
 Coffey, G. C., Platte City, Mo.  
 Dinwiddie, F. G., Camden Point, Mo.  
 Gardner, P. L., Waldron, Mo.  
 Hale, J. M., Dearborn, Mo.  
 Herndon, A. S., Camden Point, Mo.  
 Moore, M. H., Dearborn, Mo.  
 Morrison, Virgil, Iatan, Mo.  
 Naylor, Alva, Platte City, Mo.  
 Patterson, H. H., Edgerton, Mo.  
 Redman, Spencer, Platte City, Mo.  
 Smedley, W. H., Weston, Mo.  
 Swaney, W. D., Linkville, Mo.  
 Wilson, R. P. C., Platte City, Mo.

PULASKI COUNTY.

Carter, W. C., Dixon, Mo.  
 Clairborn, D., Waynesville, Mo.  
 Harrison, R. T., Dixon, Mo.  
 Murphy, H. C., Richland, Mo.  
 Oliver, L. A., Richland, Mo.  
 Ragan, W. L., Richland, Mo.  
 Rolens, L. E., Dixon, Mo.  
 Stebbins, N. L., Crocker, Mo.  
 Tice, L., Waynesville, Mo.

PUTMAN COUNTY.

Carrier, C. H., Hartford, Mo.  
 Cozad, F. A., Powerville, Mo.  
 Geisinger, E. J., Unionville, Mo.  
 Gray, L. L., St. John, Mo.  
 Haynes, Lee, Mendota, Mo.  
 Holman, J. H., Unionville, Mo.  
 Montgomery, E. A., Unionville, Mo.  
 Noel, Frank, Unionville, Mo.  
 Rice, F. D., Lucerne, Mo.  
 Townsend, J. A., Unionville, Mo.

RALLS COUNTY.

Birney, W. L., Oakwood, Mo.  
 Downing, T. J., New London, Mo.  
 Graves, C. H., Center, Mo.  
 Hendrix, W. G., New London, Mo.  
 Horwood, W. S., Rensselaer, Mo.  
 Monroe, Thos., Center, Mo.  
 McCullon, R. W., Center, Mo.  
 Ragen, Sam., New London, Mo.  
 Walter, Fred., Perry, Mo.  
 Waters, W. T., New London, Mo.  
 Wix, F. M., Center, Mo.  
 Winn, M., Hosco, Mo.

RANDOLPH COUNTY.

Braggs, G. G., Huntsville, Mo.  
 Clapp, C. B., Moberly, Mo.  
 Cuppaidge, G. O., Moberly, Mo.  
 Dickerson, W. M., Renick, Mo.  
 Hickerson, E. R., Moberly, Mo.  
 Magee, W. K., Moberly, Mo.  
 Mangus, C. W., Moberly, Mo.  
 Mangus, T. D., Moberly, Mo.  
 Schrader, W. E., Moberly, Mo.

RAY COUNTY.

Cook, T. B., Ravville, Mo.  
 Crowley, C. C., Richmond, Mo.  
 Greene, L. D., Richmond, Mo.  
 Hamilton, R. L., Richmond, Mo.  
 Higdon, E. F., Richmond, Mo.  
 Magor, H., Hardin, Mo.  
 McCaugh, E. T., Richmond, Mo.  
 Mussen, E. H., Richingham, Mo.  
 Sevier, R., Richmond, Mo.  
 Shotwell, C. B., Richmond, Mo.  
 Smith, James W., Richmond, Mo.  
 Sheets, R., Orrick, Mo.

RIPLEY COUNTY.

Cordrey, H. D., Chaffee, Mo.  
 Kerr, Wesley B., Doniphan, Mo.  
 Proctor, S. A., Doniphan, Mo.  
 Redwine, J. F., Doniphan, Mo.

ST. CHARLES COUNTY.

Baltzer, H., Cottleville, Mo.  
 Bitter, Carl, St. Charles, Mo.  
 Bruere, John, St. Charles, Mo.  
 Corley, H. N., St. Paul, Mo.  
 Dunn, E. P., St. Peter, Mo.  
 Gassow, A., St. Charles, Mo.  
 Hardy, Wm. F., 2302 N. Jefferson Ave., St. Louis.  
 Morgner, O., St. Charles, Mo.  
 Mudd, J. R., St. Charles, Mo.  
 Muhn, O. A., New Melle, Mo.  
 Stumberg, B. K., St. Charles, Mo.  
 Tainter, E. J., St. Charles, Mo.  
 Wentker, B. P., St. Charles, Mo.

ST. CLAIR COUNTY.

Bell, W. E., Osceola, Mo.

Cline, W., Appleton City, Mo.  
 Edmonson, M. T., Iconium, Mo.  
 Gathright, J. B., Appleton City, Mo.  
 Landaker, C. L., Collins, Mo.  
 Mason, J. W., Weaubleau, Mo.  
 Miles, E. D., Osceola, Mo.  
 Moorehouse, Emma, Appleton City, Mo.  
 Russell, R. L., Osceola, Mo.  
 Smith, R. J., Johnson City, Mo.  
 Stratton, C. S., Roscoe, Mo.  
 Williams, D. B., Osceola, Mo.

ST. FRANCOIS COUNTY

Barber, M. B., Flat River, Mo.  
 Burch, E. J., Doe Run, Mo.  
 Evans, A. L., Bonne Terre, Mo.  
 Haney, T. L., Flat River, Mo.  
 Keith, F. L., Flat River, Mo.  
 Marshall, A., Bonne Terre, Mo.  
 Perkins, G. B., Elvins, Mo.  
 Poston, C. P., Bonne Terre, Mo.  
 Robinson, B. J., Farmington, Mo.  
 Shannon, I. N., Knob Lick, Mo.  
 Smith, O. A., Farmington, Mo.

STE. GENEVIEVE COUNTY.

Hertich, C. J., Ste. Genevieve, Mo.  
 Hinch, F. E., Ste. Genevieve, Mo.  
 Jarvis, N. W., Bloomdale, Mo.  
 Lanning, R. W., Ste. Genevieve, Mo.  
 Meyer, A. G., Ste. Genevieve, Mo.  
 Moore, C., St. Mary's, Mo.  
 Morganstein, H. J., Weingarten, Mo.  
 Rutledge, G. M., Ste. Genevieve, Mo.  
 Shirley, J. M., St. Mary's, Mo.  
 Wilkins, J. A., St. Mary's, Mo.

ST. LOUIS COUNTY.

Brossard, P. M., Maplewood, Mo.  
 Campbell, A. V., 311 Globe Democrat Bldg., St. Louis.  
 Cape, L. W., Maplewood, Mo.  
 Carter, H., Webster Groves, Mo.  
 Coleman, H. F., Pattonville, Mo.  
 Dalton, M., Fenton, Mo.  
 Denny, R. B., Eureka, Mo.  
 Douglass, J. T., Ferguson, Mo.  
 Dunnivant, C. A., Kirkwood, Mo.  
 Gallagher, J. C., Kirkwood, Mo.  
 Greensfelder, H., 522 Washington Ave., St. Louis.  
 Higgins, R. M., Kirksville, Mo.  
 Jenson, N. N., Florissant, Mo.  
 Kinner, Wm., Ferguson, Mo.  
 Moore, R. D., Central, Mo.  
 Pfister, J. D., Creve Coeur, Mo.  
 Pitman, John, Kirkwood, Mo.  
 Reynolds, S. H., Maplewood, Mo.  
 Thurman, E. J., Fenton, Mo.  
 Townsend, W. H., Maplewood, Mo.  
 Wyer, H. G., Kirkwood, Mo.

ST. LOUIS MEDICAL SOCIETY.

(All addresses St. Louis, Mo.)

Abeken, F. W., 3531 S. Broadway.  
 Albrecht, F. H., 3763 Westminster Pl.  
 Allison, N., Linmar Bldg.  
 Allyn, A. B., 5004 Arsenal Ave.  
 Alt, A., 3036 Locust Str.  
 Althaus, Carl., 2024 S. Jefferson.  
 Ambrose, A. O., 313 N. Ninth Str.  
 Ameiss, F. C., Vanol Bldg.  
 Amos, N. W., 3001 Olive Str.  
 Amyx, R. E., 1943 N. Eleventh Str.  
 Amerland, J. H., 2739 Chippewa St.  
 Apperson, E. L., 3343 Morgan.  
 Atkins, H. S., Insane Asylum.  
 Atkinson, R. C., 3002 Lafayette Ave.  
 Aufderheide, W. D., 2754 Arsenal Str.  
 Auler, H. A., 2708 Lynch Str.  
 Ayars, T. R., 3739 Easton Ave.  
 Babler, E. A., 617 Euclid Ave.  
 Bailey, F. W., 1811 California Ave.  
 Baker, R. W., 4233 Olive Str.  
 Ball, J. M., 3509 Franklin Ave.  
 Ball, O. F., Linmar Bldg.  
 Barck, C., Humboldt Bldg.

- Barclay, R., 3894 Washington Ave.  
 Bardenheier, F. G. A., 900 S. Fourth Str.  
 Barnes, A. S., 5434 Maple Ave.  
 Barnes, A. S., Jr., Mo. Trust Bldg.  
 Barnes, P. C., 2931 Easton Ave.  
 Barnes, R. H., 412 Sarah Str.  
 Bartlett, Willard, 4257 Washington Ave.  
 Bartscher, H. W., 829 Bremen Ave.  
 Bauduy, J. K., 3505 Franklin.  
 Bauer, C. E., 2104 N. Fourteenth Str.  
 Baumgarten, G., Humboldt Bldg.  
 Baumgarten, Walter, Humboldt Bldg.  
 Becker, W. H., 4743 Labadie Ave.  
 Beckham, G. S., 5110 Page Boul.  
 Bedal, A. C., 3418 Lucas Ave.  
 Bennett, Floyd W., 2828 St. Vincent Ave.  
 Behrens, L. H., 5 S. Broadway.  
 Bishop, F. L., 516 N. Garrison Ave.  
 Black, W. D., 1411 California Ave.  
 Blair, V. P., Linmar Bldg.  
 Bliss, M. A., Humboldt Bldg.  
 Block, Robt. C., Clarksville, Mo.  
 Bock, A. F., 1107 N. Grand Ave.  
 Boisliniere, L. C., 3561 Olive Str.  
 Boehm, J. L., Eighth & Morgan Str.  
 Boemler, Geo., 1922 St. Louis Ave.  
 Bond, H. W., City Hall.  
 Boogher, F., High & Carr Strs.  
 Boogher, J. L., Mo. Trust Bldg.  
 Booth, D. S., Linmar Bldg.  
 Borek, Edw., 3816 N. Twentieth Str.  
 Bradley, A. H., 1019 N. Twenty-first Str.  
 Brady, J. M., 1467 Union Boul.  
 Breed, M. E., 1018 Hamilton Ave.  
 Bond, Y. H., 315 N. Grand Ave.  
 Bribach, Benno, 7608 Michigan Ave.  
 Briggs, Waldo, 2600 Gamble.  
 Brookaw, A. V. L., 536 N. Taylor Ave.  
 Brooks, H. S., 3557 Lafayette Ave.  
 Broome, G. W., 619 N. Kingshighway.  
 Brown, J. Y., City Hospital.  
 Brown, O. H., Grand & Caroline Str.  
 Bryan, W. M. C., 3858 Westminster Pl.  
 Buck, T. E., 2610 S. 26th Str.  
 Buckwalter, J. C., Century Bldg.  
 Burford, C. E., 932 Hamilton Ave.  
 Burnett, D. C., 2602 N. Taylor Ave.  
 Burns, R., 4500 Olive Str.  
 Butler, L. P., Maryland & Euclid.  
 Cadwallader, I. H., 919 N. Taylor Ave.  
 Cale, G. W. Jr., 12 Lenox Place.  
 Campbell, G., 3429 Morgan Ave.  
 Campbell, O. H., 2647 Washington Ave.  
 Cape, L. W., Sutton & Hazel.  
 Caplan, L., 4500 Olive Str.  
 Carley, H. D., 3419 Bell Ave.  
 Carman, R. D., 4419 Olive Str.  
 Carson, N. B., Humboldt Bldg.  
 Carson, G. W., 301 Century Bldg.  
 Chaddock, C. G., 3750 Lindell Bl.  
 Charles, Jos. W., Humboldt Bldg.  
 Clapper, Wm. L., 5004 Delmar Ave.  
 Clemens James, R., 3720 Pine Str.  
 Clopton, M. B., Humboldt Bldg.  
 Cook, Jerome E., City Hospital.  
 Crandall, G. C., 4287 Olive Str.  
 Creveling, H. C., Humboldt Bldg.  
 Crossen, H. S., 4477 Delmar Ave.  
 Cummings, H. J., 1200 N. Grand Ave.  
 Dalton, H. C., 3536 Easton Ave.  
 Davis, L. H., 1017 Park Ave.  
 Davis, W., Academy & Page.  
 Davis, H. Robert, Lister Bldg.  
 Dean, J. M., 319 N. Grand Ave.  
 Deutsch, W. S., 3135 Washington Ave.  
 Dickerson, W. L., 5424 Easton Ave.  
 Dixon, C. H., Lister Bldg.  
 Dorsett, Walter, B., Linmar Bldg.  
 Dickerson, H. W., 536 N. Taylor Ave.  
 Dorsey, B. L., 1422 N. Taylor Ave.  
 Doyle, W. J., City Hospital.  
 Drake, Geo. S., Jr., Humboldt Bldg.  
 Drescher, F. B., 8 S. Broadway.  
 Dudley, C. R., Chemical Bldg.  
 Duncan, J. H., Humboldt Bldg.  
 Eberlein, E. W., 1208 Dillon Str.  
 Ehrenfest, H., Vanol Bldg.  
 Elbrecht, O. H., Female Hospital.  
 Elmer, W. P., 612 N. Taylor Ave.  
 Engelbach, Wm. Mermod & Jaccard Bldg.  
 Engman, M. F., Humboldt Bldg.  
 Epstein, M. J., 1905 N. Eleventh Str.  
 Evans, John L., 1600 California Ave.  
 Ewing, F. C., Century Bldg.  
 Ewing, A. E., 5956 Cabanne Ave.  
 Eyermann, E. H., 1800 S. Broadway.  
 Faber, J. E., 2123 S. 26th Str.  
 Fahlen, F., Humboldt Bldg.  
 Falk, J. C., 2701 Stoddard Str.  
 Ferrell, H. E., 822 N. Grand Ave.  
 Fichtenkam, H. L., 1933 Lynch Str.  
 Fisch, C., 3212 Pine Str.  
 Fischer, W. E., Humboldt Bldg.  
 Fischer, Walter, City Hospital.  
 Fischer, W., Linmar Bldg.  
 Fleming, A. W., 4130 Manchester Road.  
 Forster, O. E., Carleton Bldg.  
 Forster, Davis, 6209 Easton Ave.  
 Fowler, S. R., Carleton Bldg.  
 Fox, S. D., 705 N. Kingshighway.  
 French, Pinckney, Mo. Lincoln Trust Co.  
 Frankenthal, M., 4163 McPherson Ave.  
 Freudenstein, W. H., 2826 Clark Ave.  
 Freund, N. M., 1440 S. Eighteenth Str.  
 Friedman, J., 308 N. Sixth Str.  
 Frielingsdorf, E. H., 2202 S. Broadway.  
 Fry, F. R., Humboldt Bldg.  
 Fuchs, W. H., Lafayette & Compton Ave.  
 Fuhrmann, R. H., 3221 California Ave.  
 Fulton, A. L., 617 Chouteau Ave.  
 Funkhouser, R. M., 4354 Olive Str.  
 Furney, E. E., 3417 Morgan Str.  
 Gamble, D. C., 644 Century Bldg.  
 Garstang, D. B., Linmar Bldg.  
 Gaylor, W. C., 3904 Laclede Ave.  
 Gehrung, E. C., Linmar Bldg.  
 Geitz, H. A., Humboldt Bldg.  
 Gellhorn, Geo., Linmar Bldg.  
 Gettys, S. L., Linmar Bldg.  
 Glasgow, W. C., Lister Bldg.  
 Glasgow, F. A., 3894 Washington Ave.  
 Goebel, A., 3508 Manchester.  
 Goodloe, H., Vanol Bldg.  
 Goodwin, E. J., Linmar Bldg.  
 Gorin, M. Geo., 4225 W. Bell.  
 Gradwohl, R. B. H., 5269 Vernon Ave.  
 Graham, I. E., 1417 Newsstead Ave.  
 Graham, T. E., City Hospital.  
 Grant, J. M., 4132 Easton Ave.  
 Graul, R. E., 2705 Cherokee Str.  
 Graves, S. C., 3603 Lindell Bl.  
 Graves, Wm. M., Vanol Bldg.  
 Green, John, Jr., Vanol Bldg.  
 Greer, E. O., 2750 Park Ave.  
 Greiner, Theodore, 5534A Easton Ave.  
 Griffin, P. H., 4504 Easton Ave.  
 Grindon, Joseph, 3894 Washington Ave.  
 Gross, J. H., 306 Oriol Bldg.  
 Grote, W. F. H., 2705 N. Fourteenth Str.  
 Guggenheim, Louis L., City Hospital.  
 Guhman, J. O., 4531 Washington Ave.  
 Guhman, M. J., 3505 N. Twenty-sixth Str.  
 Guhman, Charles, N. Forty-third & Finney Ave.  
 Haase, M. E., 1105 S. Seventh Str.  
 Hall, Willis, Humboldt Bldg.  
 Hall, H. R., 925 Goodfellow Ave.  
 Hall, Fred, B., 2917 Washington Ave.  
 Hallam, J. C., Mermod & Jaccard Bldg.  
 Hardaway, W. A., Lister Bldg.  
 Hardy, Joseph A., 7620 S. Broadway.  
 Harnisch, H. D., 2407 S. Eighteenth Str.  
 Harris, D. L., 926 Academy Ave.  
 Hartmann, Jacob A., 1220 Hickory Str.  
 Hauck, E. F., 1638 S. Twenty-sixth Str.  
 Hauck, L., 903 Morrison Ave.  
 Hawley, M. J., Century Bldg.  
 Hawley, T. S., 3065 Easton Ave.  
 Helwig, H. J., 2804 Manchester Ave.  
 Hempel, Max, 2857 N. Grand Ave.  
 Hempelmann, L. H., 1107 N. Grand Ave.  
 Henckler, E. H., 2237 Chouteau Ave.  
 Henderson, F. L., Humboldt Bldg.  
 Henke, A. F., 2210 Howard Str.  
 Hennerich, J. P., 2921 S. Broadway.  
 Herchenroeder, L. C., 2904 Park Ave.



- Hermann, H. W., 1127 N. Grand Ave.  
 Heuer, Phil. H., Humboldt Bldg.  
 Heyer, C., 910 N. Tenth Str.  
 Higbee, E. H., 4952 Park View Pl.  
 Hill, Roland, 4605 Delmar Ave.  
 Hinchey, Frank, 1107 N. Grand  
 Hirschi, W. T., 2217 N. Grand Ave.  
 Hochderfer, D. F., 308 N. Sixth Str.  
 Hoeffer, J. P., 2304 S. Compton Ave.  
 Hoffman, P., 3337 Washington Ave.  
 Hoge, M. W., Linmar Bldg.  
 Holman, R. S., 3951 Delmar Ave.  
 Holtgrewe, F. W., 1601 Blair Ave.  
 Holt, E. E., 1532 Franklin Ave.  
 Homan, G., Odd Fellows' Bldg.  
 Hopkins, M. J., 3400 Pine Str.  
 Hopkins, Ross, 5917 Maple Ave.  
 Hopkins, T. A., Century Bldg.  
 Horwitz, M. R., 3000 Olive Str.  
 Howard, A. P., Linmar Bldg.  
 Hughes, C. H., 3872 Washington Ave.  
 Hughes, Mark Ray, 3872 Washington Ave.  
 Hypes, B. M., 2005 Victor Str.  
 Jacobs, M. W., 2307 S. Grand Ave.  
 Jacobson, H., Mo. Trust Bldg.  
 James, J. A. J., Carleton Bldg.  
 Jude, J. J., 2521 S. Broadway.  
 Jennings, J. E., Carleton Bldg.  
 Jennings, M. D., 4101 Washington Ave.  
 Johnson, E. H., 2507 N. Spring Str.  
 Johnson, F. P., 3744 Finney Ave.  
 Johnson, H. Mc C., Linmar Bldg.  
 Jonas, E., 4474 Westminster Pl.  
 Jones, M. D., 4068 Washington Ave.  
 Jungk, C. G. W., 536 N. Taylor.  
 Kane, R. E., 1123 N. Grand Ave.  
 Kessler, E. H., 3446 Shenandoah Ave.  
 Kennedy, W. U., 1121 Cass Ave.  
 Kieffer, A. R., 4268 W. Belle Pl.  
 Kier, W. F., 3609 Lindell Bl.  
 Kimball, A. C., Grand & Franklin Ave.  
 Kirchner, W. C. G., 1211 N. Grand Ave.  
 Kistler, H. D., Grand & Caroline.  
 Klein, S., 1921 N. Grand Ave.  
 Klokke, Wm. E., 1316 Mississippi Ave.  
 Kleinfelter, M. L., 536 N. Taylor.  
 Klenk, C. L., 2105 S. Broadway.  
 Koenig, G. W., 740 S. Fourth Str.  
 Koetter, A. F., 1023 N. Grand Ave.  
 Krebs, G. A., 2709 S. 11th Str.  
 Krebs, F. J. V., 1906 St. Louis Ave.  
 Krenning, W. G., 4041A St. Louis Ave.  
 Kuhlman, T. C. E., 2135 St. Louis Ave.  
 Kuhn, D., 1746 Chouteau Ave.  
 Laidley, L. H., 308 N. Sixth Str.  
 Langan, W. J., Plymouth & Goodfellow Ave.  
 Lare, H. S. P., 4552 Morgan Str.  
 Larew, J. L., Olivia Bldg.  
 Lawrence, W. S., 1913 N. Grand Ave.  
 Lebrecht, J. C., 900 S. Fourth Str.  
 Leighton, W., 926 Academy Ave.  
 Lemen, J. R., Vanol Bldg.  
 Lewis, Bransford, 627 Century Bldg.  
 Lewis, Chas., 1402 Monroe Str.  
 Levy, A., Lister Bldg.  
 Lightner, C. R., 2313 Washington Ave.  
 Link, J. J., Mermod & Jaccard Bldg.  
 Lippe, M. J., 4321 W. Belle Pl.  
 Loeb, C., Humboldt Bldg.  
 Loeb, H. W., Humboldt Bldg.  
 Lowenstein, H. M., 2615 N. Taylor.  
 Long, J. M., 513 Sarah Str.  
 Luedeking, R., 1837 Lafayette Ave.  
 Luton, L. S., 1023 N. Grand Ave.  
 Lutz, F. J., 1630 S. Grand Ave.  
 Lyman, H. W., Carleton Bldg.,  
 Mann, F. P., 3927 N. Twentieth Str.  
 Mardorf, W. C., 1111 Chouteau Ave.  
 Marks, H., 2930 Morgan Str.  
 Martin, T. A., Century Bldg.  
 Marx, Ella., 4269 Delmar Ave.  
 Mayes, J. F., 1803 Olive Str.  
 McCandless, W. A., 3857 Westminster Pl.  
 McClure, J., 1702 Market Str.  
 McKay, H. S., 1625 S. Twenty-sixth Str.  
 McLean, Mary, H., 4339 Delmar Boul.  
 Meisenbach, A. E., 2624 S. Jefferson Ave.  
 Meisenbach, A. H., 2229 S. Broadway.  
 Menistrina, J. F., 3409 Washington Ave.  
 Meng, E. R., 728 N. Taylor Ave.  
 Merz, A., 3114 Cherokee Str.  
 Meyer, H. H., 1823 N. Taylor Ave.  
 Miller, H. E., 2257 Missouri Ave.  
 Miller, J. J., 4439 Morgan Str.  
 Millican, K. W., 3837 West Pine Str.  
 Miltenberger, Val. E., 1825 Pestolozzi Str.  
 Mook, W. H., Humboldt Bldg.  
 Moore, B. W., 3634 Washington Ave.  
 Moore, H. M., Linmar Bldg.  
 Moore, J. W., 906 Pine Str.  
 Moore, W. G., 86 Vandeventer Pl.  
 Morfit, J. C., Humboldt Bldg.  
 Morris, C. C., 2945 Franklin Ave.  
 Mosby, C. V., 2313 Washington Ave.  
 Mudd, H. G., Humboldt Bldg.  
 Mueller, E., 3334 California Ave.  
 Mueller, V. J., 2815 Gamble Str.  
 Munson, C. L., 622 Hickory.  
 Muetze, Henry, 3201 Shenandoah Ave.  
 Munch, A. P., 1504 Wagoner Place.  
 Murphy, J. C., 4263 Morgan Str.  
 Murphy, R. B., 6035 Manchester Ave.  
 Myer, J. S., 3894 Washington Ave.  
 Myerduck, Albert H., 536 N. Taylor Ave.  
 Neuhoft, F., 1318 Chouteau Ave.  
 Nalley, Thomas J., 315 N. Grand Ave.  
 Norris, E. J., 4323 Russell Ave.  
 Newman, L. E., Humboldt Bldg.  
 Newman, S. E., 465 N. Taylor Ave.  
 Nicholson, C. M., Lister Bldg.  
 Nietert, H. L., Century Bldg.  
 Nifong, F. G., Columbia, Mo.  
 Oatman, L. J., 4217 Olive St.  
 Ohmann-Dumesnil, A. H., 5 S. Broadway.  
 O'Reilly, R. J., 602 N. 7th Str.  
 Orr, C. J., Linmar Bldg.  
 Outten, W. B., Mo. Pac. Hospital.  
 Owen, W. C., 3846 Folsom Ave.  
 Padberg, L. R., 3550 Arsenal Ave.  
 Parman, D. R., Linmar Bldg.  
 Parker, C. W., 3502 N. Jefferson Ave.  
 Parker, Frederick., 1423 Euclid.  
 Patton, F. W., 5617 Maple Ave.  
 Poignee, F. P., 914 Hickory Str.  
 Pfeifferberger, J. M., Humboldt Bldg.  
 Phillips, G. M., 520 Olive Str.  
 Pierce, H. M., 4046 N. Grand Ave.  
 Poland, M. E., 4043 St. Louis Ave.  
 Pollman, L. P., 2002 St. Louis Ave.  
 Popper, M., Mermod & Jaccard Bldg.  
 Porterfield, E. P., 4635 Easton Ave.  
 Post, H. M., Twenty-seventh & Washington Ave.  
 Potts, Alfred R., 536 N. Taylor.  
 Potts Jerome D., Lister Bldg.  
 Powell, C. H., Century Bldg.  
 Printz, H., Century Bldg.  
 Rassieur, L., City Hospital.  
 Ravold, A., 312 Century Bldg.  
 Reder, F., 4629 Cook Ave.  
 Remme, C. F., 400 S. Fourteenth Str.  
 Rice, D. F., 5145 Cabanne Ave.  
 Rienders, Otto, 2107 S. Eleventh Str.  
 Riesmeyer, L. T., 2838 Lafayette Ave.  
 Riley, C. M., Alton Ills.  
 Riley, R. D., 4641 Washington Ave.  
 Ring, Frank, Chemical Bldg.  
 Robinson, A. C., 5083 Westminster Pl.  
 Robertson, W. M., Humboldt Bldg.  
 Rohlfing, C. G., 1200 N. Eighth Str.  
 Rohlfing, H. A. L., 2602 Laclede Ave.  
 Rohlfing, L. C., 3126 N. Grand Ave.  
 Rosebrough, F. H., Grand & Bell Ave.  
 Ross, J. B., 1908 E. Grand Ave.  
 Rothstein, H. B., 3309 S. Thirteenth Str.  
 Rowe, Alfred R., 536 N. Taylor.  
 Rule, J. B., Olivia Bldg.  
 Rumbold, F. M., 450 Century Bldg.  
 Salter, J. C., 3634 Washington Ave.  
 Sauer, W. E., Humboldt Bldg.  
 Saunders, E. W., 3003 Lafayette Ave.  
 Saxl, Ernst., Century Bldg.  
 Scharff, Eugene, A., Frisco Bldg.  
 Scherck, H. J., 403 Century Bldg.  
 Schisler, E., 2027 S. Jefferson.  
 Schleiffarth, C. W., 3619A Connecticut.

Schlosstein, A. G., 3153 Longfellow Ave.  
 Schluter, R. E., 1140 S. Fourth Str.  
 Scmalhorst, D. E., 8111 N. Broadway.  
 Schmidt, W. C., 2417 S. Broadway.  
 Scholz, P., 3403 N. Fourteenth Str.  
 Scholz, R. P., 1110 Ferry Str.  
 Schuchat, W. L., 2200 Chouteau Ave.  
 Schulte, F. A., 2447 N. Spring Str.  
 Schwab, S. I., Vanol Bldg.  
 Schwarz, H., 440 N. Newstead Ave.  
 Schwarze, A., 2921 S. Jefferson Ave.  
 Semple, N. M., Humboldt Bldg.  
 Shanklin, Ben, 2734 Chouteau Ave.  
 Shapleigh, J. B., Humboldt Bldg.  
 Shattinger, C., 2924 S. Grand Ave.  
 Shields, W. B., Linmar Bldg.  
 Shoemaker, J. F., Carleton Bldg.  
 Shoemaker, W. A., 1006 Carleton Bldg.  
 Shutt, C. H., City Hospital.  
 Senseney, Eugene, T., 2829 Washington Ave.  
 Sieving, H. J. C., 1125 St. Louis Ave.  
 Singer, Jacob J., Female Hospital.  
 Simon, J. H., 4104 Manchester Ave.  
 Skinner, Edward, H., 2313 Washington Ave.  
 Sluder, G., 2647 Washington Ave.  
 Smith, Elsworth, Jr., Humboldt Bldg.  
 Smith, J. C., Humboldt Bldg.  
 Smith, J. W., Mermod & Jaccard Bldg.  
 Soper, H. W., 813 N. 18th Str.  
 Spencer, H. N., 2723 Washington Ave.  
 Spiegelhalter, J., 2166 Lafayette Ave.  
 Stauffer, W. H., Humboldt Bldg.  
 Straus, Leon, 805 N. Grand Ave.  
 Streutker, C. E. F., 2410 S. 10th Str.  
 Steedman, J. G. W., 2803 Pine Str.  
 Steer, J., 3126 Washington Ave.  
 Stevens, C. D., 1749 S. Grand Ave.  
 Stewart, F., 1001 Olive Str.  
 Stocking, L. C., 1304 Academy Ave.  
 Stockwell, B. E., 2345 S. Broadway.  
 Suggett, O. L., 423 Commercial Bldg.  
 Summa, Hy. H., 3707 N. Eleventh Str.  
 Summa, Hugo, 2249 St. Louis Ave.  
 Sutter, O., Century Bldg.  
 Talbott, H., Humboldt Bldg.  
 Tanquary, J. H., 930 Belt Ave.  
 Taake, E. F., City Hospital.  
 Taussig, A. E., 3519 Washington Ave.  
 Taussig, F. J., 534 N. Vandeventer Ave.  
 Temm, Louis, N., 3514 N. Market Str.  
 Terry Robert J., 4443 Washington Ave.  
 Thierry, C. W., 303 N. Grand Ave.  
 Tiedemann, E. F., 2253 S. Vandeventer Ave.  
 Tooker, Chas. W. Jr., Humboldt Bldg.  
 Trotman, C. A., 5193 Morgan Str.  
 Tuholske, H., 465 N. Taylor Ave.  
 Tuholske, M. C., Female Hospital.  
 Tupper, P. Y., 534 N. Vandeventer Ave.  
 Tuttle, G. M., 4519 Washington Ave.  
 Ude Waldemar, 3531 S. Grand Ave.  
 Valle, J. F., 3303 Washington Ave.  
 Van Hoefen, S. A., 8313 Halls Ferry Road.  
 Vasterling, Paul, Mo. Pac. Hospital.  
 Vaughan, J. W., 4001 W. Belle Pl.  
 Viedt, E. J., 2215 S. Grand Ave.  
 Vogt, W. H., 4977 Lotus.  
 Vonderau, O. L., 1301 Geyer Ave.  
 Ward, E. P., 2831 Shenandoah Ave.  
 Ware, Chas., 1404 Olive Str.  
 Warfield, L. M., Chemical Bldg.  
 Weber, J. B.,  
 Weinsberg, Chas. H., 1531 S. Eleventh Str.  
 Weinsberg, J. H., 2015 Russell.  
 Wesseler, F. W., 2308 Gravois Ave.  
 Whelpley, H. M., 2342 Albion Pl.  
 Wiatt, W., East St. Louis Ill.  
 Wichmann, H. L., 3229 S. Jefferson Ave.  
 Wichmann, A. G., 1624 S. Jefferson Ave.  
 Wiener, M., 500 Carleton Bldg.  
 Wilkes, B. A., Linmar Bldg.  
 Williamson, J. W., 5600 Cates Ave.  
 Williamson, L. P., 5600 Cates Ave.  
 Wills, Wm. J., 1600 California Ave.  
 Wilson, R. E., 512 Mo. Trust Bldg.  
 Winter, Wm., 3632 S. Broadway.  
 Witherspoon, T. C., 4318 Olive Str.  
 Wolf, John, 3869 Flad Ave.  
 Wolfner, H. L., Carleton Bldg.

Woodruff, F. E., 2925 Washington Ave.  
 Wyche, Chas., 401 N. Grand Ave.  
 Young, A. O., 3141 Lawton Ave.  
 Zahorsky, John, 1460 S. Grand Ave.

## SALINE COUNTY.

Bell, D. F., Marshall, Mo.  
 Chastain, M. T., Marshall, Mo.  
 Gore, D. C., Marshall, Mo.  
 Hall, J. R., Marshall, Mo.  
 Harrison, Wm., Marshall, Mo.  
 Harris, J. E., Marshall, Mo.  
 Howard, E. A., Slater, Mo.  
 Manning, J. F., Marshall, Mo.  
 McGuirre, M. S., Arrow Rock, Mo.  
 Spotts, B. M., Marshall, Mo.

## SCHUYLER COUNTY.

Bridges, J. B., Downing, Mo.  
 Gerwig, H. E., Downing, Mo.  
 Jones, J. T., Queen City, Mo.  
 Mitchell, E. L., Lancaster, Mo.  
 Mitchell, W. F., Lancaster, Mo.  
 Zeber, W. H., Queen City, Mo.

## SCOTLAND COUNTY.

Alexander, W. E., Memphis, Mo.  
 Baker, P. M., Arbela, Mo., R.F.D.  
 Bondurant, W. E. H., Memphis, Mo.  
 Davis, A. L., Arbela, Mo.  
 Edelen, B. H., Gorin, Mo.  
 Johnson, F. M., Gorin, Mo.  
 Mackey, Alonzo H., Gorin, Mo.  
 Maynard, G. K., Hitt, Mo.  
 Parrish, E. E., Memphis, Mo.  
 Pile, O. F., Memphis, Mo.  
 Platter, A. E., Memphis, Mo.

## SCOTT COUNTY.

Cannon, G. S., Fornfelt, Mo.  
 Frazer, T. F., Commerce, Mo.  
 Frazer, T. R., Commerce, Mo.  
 Haw, U. P., Benton, Mo.  
 Hutton, W. S., Fornfelt, Mo.  
 Malcolm, P. M., Sikeston, Mo.  
 Milem, J. A., Sikeston, Mo.  
 Odell, Isaac H., Chaffee, Mo.  
 Rodemeyer, Henry, Kelso, Mo.  
 Sparks, R. A., Blodgett, Mo.  
 Tomlinson, T. E., Morley, Mo.  
 Wade, Sidney J., Benton, Mo.  
 Wescoat, W. H., Oran, Mo.

## SHELBY COUNTY.

Carson, Wm., Shelbyville, Mo.  
 Chapman, Chas., Shelby, Mo.  
 Dallas, L. W., Hunnewell, Mo.  
 Devin, J. F., Shelbyville, Mo.  
 Dobson, D. A., Hunnewell, Mo.  
 Drake, A. J., Bethel, Mo.  
 Manpin, R. E., Shelbyville, Mo.  
 Owens, W. W., Oak Dale, Mo.  
 Pollard, H. M., Shelby, Mo.  
 Read, N. M., Clarence, Mo.  
 Smith, J. D., Shelby, Mo.  
 Vaughan, H. C., Shelby, Mo.  
 White, A., Lakenan, Mo.  
 Wood, A. G., Lentner, Mo.  
 Wood, A. M., Lentner, Mo.

## STODDARD COUNTY.

Allen, T. C., Bernie, Mo.  
 Ashley, John, Bloomfield, Mo.  
 Burris, L., Puxico, Mo.  
 Corbin, D. R., Bloomfield, Mo.  
 Douglass, J., Dexter, Mo.  
 Moore, E., Bloomfield, Mo.  
 Vernon, G., Dexter, Mo.  
 Turnbaugh, T. B., Bloomfield, Mo.  
 Wingo, T. B., Dexter, Mo.  
 West, S., Idalia, Mo.  
 Winter, M. S., Asherville, Mo.  
 Winter, H. A., Acorn Ridge, Mo.

SULLIVAN COUNTY.

Helton, J. W., Green City, Mo.  
Mairs, E. J., Newtown, Mo.  
Montgomery, J. S., Milan, Mo.  
Porter, E. S., Milan, Mo.  
Reid, E. W., Humphreys, Mo.  
Roberts, J. C., Boynton, Mo.  
Widner, A. E., Newtown, Mo.  
Witter, W. L. M., Milan, Mo.

VERNON COUNTY.

Adams, W. T., Richards, Mo.  
Buchanan, J. R., Nevada, Mo.  
Callaway, L. H., Nevada, Mo.  
Craig, T. B. M., Nevada, Mo.  
Dulin, E. A., Nevada, Mo.  
Jarvis, H. C., Shell City, Mo.  
Keithly, C. L., Nevada, Mo.  
McLemore, T., Nevada, Mo.  
Robinson, J. F., Nevada, Mo.  
Todd, I. B., Richards, Mo.  
Truex, J. L., Milo, Mo.  
Vanblaricum, J. W., Moundville, Mo.  
Wilson, G. C., Nevada, Mo.  
Williams, V. O., Nevada, Mo.  
Yater, J. M., Nevada, Mo.

WARREN COUNTY.

Alexander, W. J., Marthasville, Mo. ?  
Amman, E., Holstein, Mo.

Dyer, J. H., Warrenton, Mo.  
Fluesmeier, E. A., Wright City, Mo.  
Graham, A. W., Warrenton, Mo.  
McKinney, G. F., Warrenton, Mo.  
Stewart, James, Holstein, Mo.  
Horwood, W. S., Rensselaer, Mo.

WAYNE COUNTY.

Bailey, W. S., Leeper, Mo.  
Bates, F. A., Piedmont, Mo.  
Gilmer, J. E., Piedmont, Mo.  
Hale, J. W., Greenville, Mo.  
Jones, C. H., Brunot, Mo.  
McGhee, Williamsville, Mo.  
Owens, K. J., Mills Springs, Mo.  
Price, J. P., Williamsville, Mo.  
Sebastian, J. P., Patterson, Mo.  
Toney, G. W., Piedmont, Mo.

WORTH COUNTY.

Andrew, John, Grant City, Mo.  
Dove, J. D. F., Allendale, Mo.  
Gately, Villa, Grant City, Mo.  
Long, A. C., Denver, Mo.  
McKinley, W. E., Grant City, Mo.  
Mills, H. P., Sheridan, Mo.  
Mills, O. P. M., Grant City, Mo.  
Nesbitt, E. P., Sheridan, Mo.  
Phipps, I. K., Grant City, Mo.  
Robertson, W. A., Allendale, Mo.  
Smith, T. J., Grant City, Mo.



## BOOK REVIEWS.

THE PRACTICAL MEDICINE SERIES. Comprising ten volumes on the Year's Progress in Medicine and Surgery. Under the general editorial charge of Gustavus P. Head, M. D.

Vol. 1. General Medicine by Frank Billings, M. D., and J. H. Salisbury, M. D., is a general review of all that is new in the theory and practice of medicine. The abstracts convey ideas without being tiresome.

Vol. II. General Surgery, edited by J.B. Murphy, M. D., Tenseness and practicability seems to be the motto, which has been fully lived up to; the scope is as wide as the subject and takes in all that is an advance in instruments, technic and pathology.

Vol. III. Eye, Ear, Nose and Throat, by Casey A. Wood, M. D., Albert H. Andrews, M. D., and Gustavus P. Head, M. D. These editors have covered the field of the subjects as thoroughly as can be done in an abridged volume. They have used all care in presenting instruments and microscopic cuts, thus putting into the hands of readers the advances in the various subjects in the most convenient form.

These books are accessible to every general practitioner because of their brevity, and also because of the price, the series of ten volumes being sold for \$10.00. The subject matter being arranged in separate volumes it is easy for specialists to buy the material they need without paying for the whole. There should be great demand for the "Practical Medicine Series" by all classes of practitioners who try to avoid fossilizing.

HUMAN SEXUALITY. By J. Parke Richardson, M. D. The Professional Publishing Co. Philadelphia.

This work is of peculiar interest to the neurologist, psychologist and sociologist. It covers the field of normal and abnormal sexuality among the different races of the world almost completely. In this respect it is more exhaustive than the studies of Krofft-Ebbing, Havelock, Ellis and Lombroso. The remarkable sexual customs obtaining among the various tribes that live on the Pacific Islands, customs mentioned in this work for the first time. This in itself is of prime importance and moreover indicates a patience and perseverance on the part of the author, meriting unstinted praise. The chapters on Homosexuality are interesting not only to the criminologist but to the general practitioner insofar as the latter are known to make light of this abnormality. The existence of a crime against nature should be combated in every community and although certain medical men may deem it of slight importance on account of its rarity (a view contrary to the author), its mere existence should give us pause. Though the

author offers no solution of the abnormalities he describes, the presentation of facts as set forth by him combined with his lucidity of style, make an appeal which should awaken a wider interest in this subject.

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**THE EYE AND NERVOUS SYSTEM.** Their Diagnostic Relations. By Various Authors. Edited by Wm. Campbell Posey, Professor of Ophthalmology at the Philadelphia Polyclinic, and Wm. G. Spiller, Professor of Neuro-Pathology at the University of Pennsylvania. Octavo. 800 pages. Thoroughly illustrated. Cloth, \$6.00. With 22 chapters by the leading specialists of the United States. J. B. Lippincott Co. Philadelphia and London.

By opening up a new field for the general practitioner and enabling him to become acquainted with symptoms hitherto almost entirely unknown and unrecognized by him, though they are frequently first to appear in many cases of spinal and cerebral involvement, it is thought that this work will aid greatly in the advance of medical science, as, in addition to the above, it makes ophthalmologists and neurologists better acquainted with the subjects of which they treat.

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**LECTURES ON AUTO-INTOXICATION IN DISEASE, OR SELF-POISONING OF THE INDIVIDUAL.** By Ch. Bouchard, Professor of Pathology and Therapeutics; Member of the Academy of Medicine and Physician to the Hospitals, Paris. Translated with a Preface and new chapters added, by Thomas Oliver, M. A., M. D., F. R. C. P., Professor of Physiology, University of Durham. Second Revised Edition. Crown Octavo. 342 pages. Extra Cloth. Price, \$2.00 net. F. A. Davis Company, Publishers. Philadelphia.

The thirty-two Lectures in this volume deal with the toxins, pathogenic processes generally, elimination of poisons, preliminaries to the study of the toxicity of emunctory products, intestinal antiseptics, and of various diseases due to bacillary products; also the natural defenses of the organism against disease and auto-intoxication of intestinal origin. No subject commands a greater interest; none demands more serious study.

The profession everywhere will cordially welcome this carefully revised and now thoroughly up-to-date edition of an exceedingly valuable contribution in the field of pathological research and modern therapeutics.

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#### ANNOUNCEMENTS.

**MANUAL OF ANATOMY.** By A. M. Buchanan. (Professor of Anatomy, Anderson College, Glasgow. Ex-examiner in Anatomy to the University of Glasgow) To be published in two parts of about 60 pages each. 8vo. Profusely illustrated with plates and engravings. Part one. Just Ready. Cloth, \$2.75 net.

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For the first time in the history of the book American Anatomists have been asked to contribute original articles and revise sections in a new edition of Morris' "Anatomy." By thus incorporating the results

of recent investigations in American laboratories the book will have more of an international character, have a wider point-of-view, and be of greater use to teachers and students.

Prof. J. Playfair McMurrich, of the University of Michigan, has assumed the American editorship and will himself contribute two articles.

The following is a complete list of American teachers who have been prevailed upon to contribute chapters:

J. Playfair McMurrich, A. M., Ph. D., Professor of Anatomy, University of Michigan; Charles R. Bardeen, A. B., M. D., Professor of Anatomy in the University of Wisconsin; Florence R. Sabin, B. S. M. D., Associate Professor of Anatomy in the Johns Hopkins University; Irving Hardesty, A. B., Ph. D., Assistant Professor of Anatomy, University of California; G. Carl Huber, M. D., Professor of Histology and Embryology in the University of Michigan; R. J. Terry, A. B., M. D., Professor of Anatomy, Washington University, St. Louis; Abram T. Kerr, B. S., M. D., Professor of Anatomy, Cornell University.

#### BOOKS RECEIVED.

YEAR BOOK PUBLISHING Co. Chicago, 1906.

Practical Medicine Series, 1906. Vol. I (Medicine), by Murphy. Vol. II (Surgery), by Billings-Salisbury. Vol. III (Eye, Ear, Nose and throat), by Wood, Andrews, Head.

J. B. LIPPINCOTT Co. Philadelphia and London, 1906.

Consumption and Civilization, by John Bessner Huber. A. M., M. D.

Eye and Nervous System, by Posey & Spiller.

D. APPLETON & Co. New York, 1906.

Operative Otology, by Blake & Reik.

Diseases of the Eye, by Fox.

Text Book of Obstetrics, by Wright.

Modern Clinical Medicine: Infectious Diseases, by Wilson.

Modern Clinical Medicine: Diabetes, etc., by Cabot.

Clinical Study of Blood Pressure, by Janeway.

MCCLURE, PHILLIPS & Co., New York, 1906.

Walter Reed and Yellow Fever, by Howard Kelly, M. D.

SURGICAL PUBLISHING Co., New York.

Surgical Suggestions, by Brickner.

PROFESSIONAL PUBLISHING Co., Philadelphia, 1906.

Human Sexuality, by J. Parke Richardson.

P. BLAKISTON'S SON & Co., Philadelphia and New York, 1906.

Pharmacy-Quiz Compend, by Stewart.

Eczema, by Brown.

F. A. DAVIS & Co., Philadelphia, 1906.

Christianity and Sex Problems, by Hugh Northcote, A. M.

Autointoxication in Disease, by Bouchard-Oliver.

GRAFTON PRESS, New York, 1906.

Operative Gynecology, by Bainbridge-Meeker.



# JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

Volume III

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Number 3

## ORIGINAL ARTICLES

### SOME QUESTIONS CONCERNING THE TREATMENT OF UTERINE FIBROMYOMATA.\*

BY H. S. CROSSEN, M. D., ST. LOUIS, MO.

Of the many interesting and debatable points upon which considerable light has been thrown by comparatively recent work, I had chosen two for discussion. Finding, however, that the time allotted each paper was necessarily very short, I was obliged to omit the second question, which concerned the preservation of the cervix in hysterectomy for myoma.

I shall speak then on but one point and on that but briefly, for the time is limited.

The first question that presents itself, when we assume the responsibility of advising these patients is:

In what cases should the tumor be let alone, as far as operation is concerned?

In order to come quickly to the point I will eliminate at once those classes of cases about which there is practically no question.

1. Cases in which the tumor causes no symptoms. They are seen by the physician only rarely and then usually by accident.

2. Cases in which the tumor is small and is causing only slight symptoms (moderate menorrhagia or dysmenorrhœa) which are relieved by general tonic treatment with the addition of uterine astringents (ergotin, stypticin, hydrastis), and the symptoms do not return soon after the treatment has been discontinued.

3. Cases in which the patient is past 45 years of age and the tumor is stationary in size, not large enough to cause disturbing pressure symptoms, accompanied by only a moderate menorrhagia and without troublesome intermenstrual symptoms.

It will hardly be questioned that for these three classes the expectant plan is the preferable treatment.

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\*Read at the annual meeting, Jefferson City, May, 1906.

4. Cases presenting conditions that threaten life or cause persistent severe suffering. The necessity of operation in this class has long been generally recognized.

It is the cases which lie between these two extremes to which I wish to direct your attention. What is the best treatment for the patients who have no threatening symptoms? They come for advice and treatment and the question is what is best to do for them?

The tumor is of moderate size, perhaps as large as the fist or two or three times as large. The patient is fairly well nourished, probably somewhat anemic, but not seriously so. The menstrual flow is excessive but by the continuous administration of ergotin or typticin it can be held down to very moderate menorrhagia. The backache and pelvic pressure are very troublesome at the menstrual periods but between the periods the patient feels fairly well and is able to do her work and attend to her social duties. She feels dragged out a good part of the time and has backache and pelvic discomfort after extra exertion. The patient is semi-invalid—not sick enough to be called sick and not well enough to be called well.

She is between 30 and 40 years of age, and has been under treatment, including a general tonic regime with the addition of uterine astringents, long enough to make it plain that the condition described is the best that can be obtained short of operation.

What advice shall we give such a patient? Should the tumor be let alone or should it be removed? You have each had fibromyoma cases and, if your experience coincides with mine, you have found it difficult at times, with the information available, to decide certainly just what is really best for such a patient.

It is easy to say to the patient: "Wait. There is no special indication for operation just now, there may be no serious increase in the symptoms at any time, and it is possible that after the menopause the troublesome symptoms will largely disappear."

The points made in that advice are all literally true and the advice itself seems plausible. But when some complication or condition, that would have been prevented by early removal of the tumor, rapidly causes the death of our patient, or forces her to operation with quadrupled risk, we begin to doubt the wisdom of the waiting advice. This is not a picture of fancy. Nearly all the fibromyoma cases that were operated on the world over previous to the last two or three years, and the larger part of those that are operated on to-day, have passed through the process just mentioned.

The patient went to a physician who treated her expectantly, according to the established usage, and congratulated himself that she was getting along pretty well. And she was "getting along pretty

well"—"pretty well" toward a condition that greatly increased the risk of the operation, which was finally necessary.

I may speak plainly for I speak from experience. The cap fits and I put it on—I trust others will do the same.

In many cases the physician who long treated the patient loses the lesson of the case through no fault of his own. Some of these patients pass through many hands in the various stages of the tumor growth, for it extends through many years. Perhaps half a dozen physicians have, from the same case, been established in their conclusion that fibroid patients get along very well and rarely need operation, while only the last physician whom the patient consults has the true lesson of the case forced upon him in a way that cannot be misunderstood. In some cases the serious condition advances so rapidly or so insidiously that the patient dies without the consideration of operative measures, or is found in such condition that operation is no longer possible.

Some physicians find it hard to believe that uterine fibroids really cause death, except so rarely that the cases may be classed as curiosities. A practical experience without even a moderate number of advanced cases will quickly dispel this illusion, provided the physician watches the cases to their terminations. The fact that they do cause death is illustrated by the following cases.

Patient<sup>1</sup>, unmarried, had fibroid causing abdominal enlargement. No special symptoms, so she wished to wait until cooler weather for the operation. Before the oncome of such weather as suited her, she was seized with a chill, followed by high temperature and rapid pulse, and died. Necropsy showed extensive necrobiotic changes.

Patient<sup>2</sup>, aged 57, single, had a fibroid which gave her no special trouble for fifteen years. It then rapidly enlarged, peritonitis came on and the patient died. Necropsy showed a fibroid with sarcomatous change, and presenting extensive local involvement and distant visceral metastases.

One of the first fibroid cases that came under my notice ran the following course: Patient, aged 31, was brought into the hospital with general peritonitis. So weak no history could be obtained. Large mass in abdomen, extending two inches above umbilicus. Died in short time. At necropsy, one large fibroid and several smaller ones were found. In the large fibroid were two foci of suppuration causing peritonitis and death.

The list could be extended indefinitely from hospital records, and no doubt the personal experience of the physicians in this room would show several such cases.

On the other hand, in deciding what to do for these patients, it is easy to take the other short cut and advise all patients with palpable fibroids to be operated on—that is, it is easy for the physician. But



before advising operation in any case we must assure ourselves that the chance of death assumed is fully justified by the danger of delay in that particular case. Then if death comes in spite of every precaution, we know at least that it was not an unwarranted sacrifice. It is easy enough to advise operation but it is not so easy to restore life to the deceased—who, but for the operation, might have lived in comparative comfort to old age.

But what advice shall we give our patient? The symptoms at present are not such, in themselves, as to necessitate operation. They are not threatening speedy death neither are they causing great disability. If they continue as they are, the patient, by continuing under treatment, by lying down most of the menstrual days and by being careful at other times as to extra work and walking, may live a fairly comfortable life.

Many women, probably most women in ordinary circumstances, would prefer this state rather than seek complete health through a dangerous operation, even though the operative mortality is small. And I am not going to condemn such a choice—in fact, granted the stationary character of the trouble, I would strongly advise such a course.

But have we any well-grounded assurance that the trouble will remain stationary? There lies the gist of the matter.

The patient comes to the physician to learn, not what she already knows, viz., that with the present symptoms she can get along in comparative comfort, but whether it is safe for her to go along in that way. She wants to know whether she had better have the tumor removed now, while she is in good condition and the risk accordingly small, or whether she had better wait and see if severe symptoms develop.

This brings us up squarely to the question of prognosis in this class of myoma cases.

It is interesting, and pertinent to the subject, to notice for a moment the method of development of surgical treatment in general and of abdomino-pelvic surgery in particular.

At first major surgery was invoked in only the most desperate cases, those that were passing to certain and speedy death. This was proper for, in the state of experience at that time, the operation itself meant death in many cases. It was a desperate remedy for a desperate condition, and occasionally attained success. As the technique was perfected, more of the desperate cases were rescued from death. As these fatal conditions for which operation was carried out, were studied in conjunction with the experience gained in the operative work, physicians began to anticipate the desperate and terminal conditions, and to operate when the patient was in a somewhat better con-

dition and with much better success. Then they began to look still further ahead and consider the possibilities of surgery in conditions that became inoperable many months before death. Thus was gradually worked the prognosis and required treatment for ovarian tumors, for uterine cancer and for other pelvic and abdominal disease that were found to prove invariably fatal within a few years. The necessity of early operation in these conditions that proved fatal in a comparatively short time, was soon established, and gained general acceptance long ago. The course of such diseases was quickly run. Within the short period of a few years, the physician saw the patient a well woman, then the disease beginning, then its full development and then the invariable death, this taking place so quickly that it was all under the one physician and within his recent recollection. The lesson was obvious; delay meant death.

That field conquered, surgical attention was directed to the question of early operation in those diseases which, though not invariably causing death, nevertheless frequently caused death and in another large proportion of the cases caused persistent suffering and invalidism. Then was worked out the advisability of operation in the quiescent period, before the onset of the threatening or terminal symptoms, in cases of persistent pyosalpinx, appendicitis, nephrolithiasis, cholelithiasis, and many other abdominal and pelvic conditions that run a comparatively rapid course. In the case of a patient with one of these diseases, the prognosis is not necessarily fatal. Many such patients, having persistent symptoms, have lived to old age. And yet when any one of these conditions is unmistakably present, and there are persistent symptoms from it, there is little question but the removal of the disease is the part of wisdom, not so much because the present symptoms are troublesome but because the symptoms indicate that the process is continuing active, it having been established, and generally accepted, that when any one of these diseases is persistently active, it is liable at any time to develop a condition that may cause the patient's death or make more hazardous the operation then necessary to save her from death or from chronic invalidism.

This is exactly the condition that is present in uterine fibromyoma with persistent symptoms, even though the symptoms are not for the present threatening or disabling. Yet this fact is not generally recognized, and there is good reason for its not being recognized. Physicians generally have the excellent habit of requiring proof before accepting a statement and the absolute proof as to the advisability of early operation in uterine fibromyoma has not been forthcoming. I say this with all due respect to the many excellent men who have expressed as many excellent variations of the opinion that early operation is advisable. Opinion is not proof. It usually precedes proof and stirs up and brings out proof. When the proof is produced,

however, it is sometimes found that the opinion which preceded it, "preceded" in the wrong direction. So I am not surprised that the profession waits to see the proof before accepting the statement that early operation should be the rule in these cases.

When we come to produce the proof we find that we haven't it—at least, if any one has it I have not seen it and I have spent a good deal of time looking for it in the last few years.

Facts are gradually being accumulated, and many bearing on various phases of the subject have already been presented to the profession, but the actual life-history of fibromyoma patients, of the class under consideration, has not been followed up and completely recorded in a sufficient number of cases to enable us to present positive proof as to what proportion of them die of the disease, what proportion suffer chronic invalidism, and what proportion experience no serious trouble.

The finding of fatal complications in a large proportion of the operated cases is not proof positive that the less severe cases should be subjected to operation, any more than the finding of perforation or abscess formation in a large proportion of the severe operated cases of appendicitis was proof positive that it was wise to subject the less severe cases to operation.

The principal question concerning these fatal complications is not what proportion of operated cases present them but what proportion of the mild cases progress to them.

I do not minimize the importance of the arduous work of determining accurately the number of these complications in operated cases. That is needed and is necessary to the determination of the proportion of serious results in all clinical fibroid cases.

But in our enthusiasm over the accomplishment of the first, we must not mistake it for the second. The proportion of operated cases presenting these fatal and disabling complications is now a matter of record, and the record includes a sufficiently large number of cases to justify fairly definite conclusions on that point. The proportion of mild cases that progress to the serious condition is not a matter of record, in fact, has not been even approximately determined, and cannot be until the life history of a very large series of the various classes of fibromyoma cases, is available for analysis.

This can be secured only by following the patients of each class through many years to the end. No doubt this matter has been taken up and will be taken up very generally and prosecuted till a sufficiently large series has been secured. I hope to accumulate some information on this point, at least for my own satisfaction, but it is uphill work. The patients move and are lost sight of. There is not the same mutual interest that attaches in operated cases and the patients are followed with greater difficulty and fewer returns. But this life history of the



less severe cases can be obtained in time and must be obtained, for it is necessary to complete knowledge of the subject.

Some of us have had an experience in these cases sufficiently large to justify us in forming and expressing an opinion to assist in the guidance of others. And though we may believe that our views are sound and founded on facts as far as they go, and will become more generally recognized as more and more facts are established, yet we must not forget that the complete proofs, in black and white, are lacking at the present time.

Why is it so hard to establish certainly the exact proportion of fibromyoma cases that turn out badly? Because of the slow progress and long duration of the disease. In persistent salpingitis or appendicitis the cases that are going to turn out badly usually do so within one or two or three years, so by watching a large series of cases for that length of time it could be determined what proportion resulted seriously, and could be established by statistical proof just what proportion of cases could be saved from death or disablement by early operation. The fibromyoma cases, on the other hand, present a much more difficult problem. Here the absence of threatening symptoms for five or ten or twenty years, gives no assurance that serious trouble may not develop at any time. Case histories are numerous showing that patients have waited patiently and hopefully for ten or twenty years, with fibroids that produced no serious symptoms, only to come at last to the operating table because of some rapidly developing trouble dependent on the tumor. Consequently each patient must be followed to the end before we can say that there was no occasion for removal of the growth in that case.

But we cannot wait until all these things are determined before giving our patient advice; she might die of old age, if not of the tumor.

What are the facts so far established, that will help to guide us in advising this patient?

1: Some fibromyomata never give any serious trouble. I refer of course to clinical fibromyomata, i. e., tumors that were recognized during life or that could have been recognized had the patient come for examination. The small latent fibroid nodules, found in such a large proportion of sectioned uteri removed post mortem, are not now under consideration.

A patient may go through a long, useful and happy life, with a palpable fibroid, and experience no particular difficulty from the growth. This fact has been demonstrated over and over again in clinical work and in autopsies on patients who have died of independent diseases or of senility.

What proportion of cases run this course we do not know, either exactly or approximately. We know only that "some"—a considerable

number—have done so. This fact, however, is sufficient to overthrow the contention that “all palpable fibroids should be subjected to operation.” There is a mortality due to the operation. To be sure the mortality is small, under proper technique and surroundings, and will become much smaller as the cases are subjected to operation earlier and therefore under safer conditions. But even in the most favorable cases there is, and will continue to be, an occasional death from the operation. And before advising operation in any case we should, as already remarked, assure ourselves that the chance of death assumed is fully justified by the danger of delay in that particular case.

2. In a certain proportion of cases there have developed fatal complications, which were due to the tumor or would have been prevented by its early removal.

Just what proportion of all clinical fibroid cases have developed, or will develop, these fatal complications we do not know, and cannot know in the present state of knowledge.

Just what proportion of operated fibroid cases have developed these complications has been determined in several series of cases, through the careful observation and painstaking labor of the physicians under whose care the patients came. No one can investigate this subject without coming to feel under personal obligation to the men who have taken the time and the labor to prosecute this work in a reliable way and to place the results before the profession. To Dr. Chas. P. Noble, of Philadelphia, belongs the credit of stirring up the profession on this subject, by presenting and keeping before it incontestible evidence, from his own work and the work of others, of the great frequency of fatal and disabling complications, due directly to these tumors or associated with with.

In a series of 1,188 cases collected by Noble<sup>3</sup> (Noble 278, Scharlieb 100, McDonald 280, Martin 205, Cullingworth 100, Frederick 125, Hunner 100), there were found the striking number of 795 degenerations.

However, in looking over this list it is seen that many of the complications are not serious and, of even the serious ones, some are in no way dependent on the presence of the tumor.

In order to determine approximately what probable fatalities, here noted, could have been prevented by early removal of the growth, I prepared the tabular analysis given below.

The number of tubal and ovarian complications prevented by early removal of the growth depends, of course, on the number of tubes and ovaries removed. I made the estimate on the basis of two-thirds of tubes removed (hysterectomy in two-thirds of the cases and myomectomy in one-third) and half of ovaries removed (both ovaries removed in one-third of the cases and one ovary removed in another third). Of course, if found advisable to limit myomectomy to a

smaller proportion of the cases, more tubes would be removed and hence more tubal complications prevented. As to whether myomectomy is preferable to hysterectomy in a considerable proportion of the cases, that is a question on which there is much of interest to be said on each side and it can not be taken up here. However, there is no question but that, as early operation is more widely adopted, a larger proportion of the cases will be found suitable for myomectomy. In fact, the more frequent saving of the uterus is one of the benefits that will follow the adoption of early operation in these cases. The chance of later enlargement of small "latent" fibroid nodules, to the dignity of clinical fibroids is not so great as to deter us in preserving the uterus in suitable cases. It happens occasionally. Some months ago I was obliged to remove the uterus for extensive multi-nodular, intra-ligamentary fibroid development in a patient, aged 31, who eighteen months previously had undergone myomectomy in a New York hospital. In this particular case I attribute the rapid growth of the fibroids partly to the chronic congestion of a severe pelvic inflammation, resulting in pyosalpinx, the infection evidently having been contracted some time after the first operation. Ordinarily, according to the reported cases that have so far come to my notice, this development of other tumors after operation has not taken place often enough to constitute a serious objection to myomectomy in suitable cases. Again, in certain cases, the preservation of the uterus is well worth the risk of a second or even a third operation.

In estimating the number of serious tubal and ovarian complications prevented by early removal of the tumor, the bare proportion of tubes and ovaries removed does not fully represent the proportion of complications prevented, for only apparently normal adnexa are left. Those tubes and ovaries which would show serious trouble later, are likely to show some abnormality at the time of operation and hence would be removed. The table includes 1,815 cases, consisting of nine series of consecutive cases (Noble 1188, as mentioned above, Watt-Keen<sup>4</sup> (from Hofmeier's clinic) 417, Webster<sup>5</sup> 210). The question is: What probable fatalities, from degeneration of the tumor or from local complications, would have been prevented by early removal of the tumor? and only the complications bearing on this question are mentioned. In the first column is given the number found of the particular degeneration mentioned. In the second column is given the number of these that would almost certainly have been prevented by the early removal of the tumor, and in the third column is given the probable fatalities from the latter.

Necrosis of tumor.....	86	86	80
Suppurating tumor .....	10	10	8
Oedematous tumor .....	11	11	4
Myxomatous degeneration of tumor .....	56	56	40



Cystic degeneration of tumor .....	53	53	30
Calcareous degeneration of tumor .....	36	36	6
Serious intra-lig. development of tumor .....	44	44	15
Malignant disease of tumor or corpus uteri .....	65	65	65
Large hydronephrosis from tumor pressure.....	6	6	3
Twisted pedacle of tumor .....	33	3	2
Pyosalpinx .....	37	24	15
Salpingitis .....	127	84	12
Abscess of ovary .....	10	5	3
Carcinoma of ovary .....	3	2	2
Ovarian cyst, including dermoids .....	118	75	60

This shows probable fatalities numbering 345, or 19 per cent. simply from the tumor degenerations and local complications mentioned, exclusive of other fatal and disabling effects of the fibroid. This I consider an ultra-conservative estimate. I believe that, were these cases traced to the end without operation, the number of deaths simply from the conditions specified would considerably exceed the number here estimated.

In a recent report by Winter<sup>6</sup> of 753 operated cases, malignant disease of the tumor or corpus uteri was found in 39 cases and total necrosis of the tumor in 17 cases. Thus, counting only two of the serious conditions mentioned in the table, it is found that they include nearly 8 per cent of his cases.

3. In a certain proportion of cases serious visceral degenerations appear in distant organs. The frequent association of heart disturbance with advanced uterine fibroid, has attracted much attention. The proportion showing heart disturbance is striking. Winter had 266 consecutive cases examined for heart diseases and found heart disturbance in 38 per cent. In five series carefully examined (Winter<sup>7</sup> 266, Strassmann and Lehmann<sup>8</sup> 71, Boldt<sup>9</sup> 79, Fleck<sup>10</sup> 325, Webster<sup>5</sup> 210), the number showing heart disturbance varied from 25 to 47 per cent., averaging 38 per cent. for the whole 951 cases. Of course, a certain number of these heart disturbances would have been found in any series of patients. But, making due allowance for these, the number is too marked and constant to be a mere coincidence. The exact connection between the two has not been worked out. But whether the heart disturbances are due principally to the chronic anemia from hemorrhage or to the direct action of some toxin manufactured in the fibroid or constitute simply an associated product of the same conditions that produced the fibroid,—whatever the cause—the fact remains that they are there and must be reckoned with. Some of these are minor functional disturbances but on the other hand many are of serious import. Even Deaver<sup>11</sup>, who is an advocate of late operation only, recently stated, "The great frequency of myocarditis and arteriosclerosis apparently directly caused by the

fibroid growth, is well known, and to sudden heart failure, pulmonary embolism or to apoplexy may no doubt be attributed many a post-operative death."

That this has actually been the case is shown by Baldy<sup>12</sup> from the records of the Gynecian Hospital. In the series of 3,413 operations, sudden post-operative death due to circulatory disturbance occurred 16 times. Thirteen of these sudden deaths occurred in the 366 fibromyoma cases, while the 3,047 other operative cases furnished only 3 such deaths. It occurred 36 times as frequently in the fibroid cases as in the general run of operative cases.

Other visceral degenerations from the chronic anemia, from pressure on the ureters and from other effects of the fibroid, produce fatalities due really to the fibroid, but attributed to other cases.

Let us now look at some of the facts that are put forward *against* the idea that myoma causes death in any considerable proportion of the cases.

1. General mortuary records show only an insignificant death rate from this disease.

The U. S. Census <sup>13</sup> (1900) shows 657 deaths from fibroid tumor of the uterus in a population of about 37,000,000 females.

The Great Britain Census (1901) shows 339 deaths from fibroid tumor of the uterus in a population of about 17,000,000 females. There is a striking agreement here, both indicating that the death rate is about 1 in 50,000—a very soothing proposition to one called to treat a patient so afflicted. According to this, I suppose the patient has about as much chance of being killed by lightning as by her fibroid. But was this all the deaths from fibroid disease in that time? Do not the numbers here given represent simply the cases in which nothing else could be found to account for the death. How about the fibromyoma patients that died of kidney disease, of heart disease, of anemia, of "uterine hemorrhage", of uterine "cancer" (cancer of endometrium associated with fibroid or a sloughing fibroid mistaken for cancer), of salpingitis, of peritonitis, and of other conditions due directly to the fibroid or that would have been prevented by its early removal? Until we count the deaths due to these complications, the census figures amount to very little as showing the deaths due to fibroid disease. They show simply that, in the countries mentioned, few patients die of *uncomplicated* fibroids.

2. Hospital records of fibroid cases show few deaths among them. In St. Bartholomew's Hospital<sup>14</sup>, among 547 uterine fibromyoma cases there were but 29 deaths, and 28 of these followed operation. Now we are getting it straight from the shoulder. Here is a series of 547 fibroid cases, only one of which died of the fibroid while 28 died of the operation—accurate records, careful diagnosis, thoroughly reliable report. What shall I say to that? Well on first

thought I would say, "Shut up shop and turn the cases over to Nature, which is beating the surgeons 28 to 1." But before deciding on that course I would seek some additional information. How many of the 28 patients who died following operation, would have died without operation? How many of the 547 patients with fibroid tumors were saved from death by operation? What was the after history of each one of the non-operated cases? When this additional information is obtained, then we will have some idea as to how many deaths from fibroid would have occurred in this series of 547 cases.

Practically the same deficiencies appear in all hospital series of fibromyoma cases, and in a measure necessarily so, for how can the hospital records show the number of non-operated cases that come to death or operation after they leave the hospital?

3. Large series of cases from private records show only a small proportion of the patients in really serious condition. There are many such reports. A recent one is that of Dr. E. J. Ill,<sup>15</sup> of Buffalo, in which he reports all fibroid cases seen by him in the preceding three years. There were 300 cases. He operated on 53 and advised operation in 6 others, making 59 cases in which operation was required according to the indications that he followed. So we have here a good large series of fibromyoma cases, carefully observed and reported, and in only about 18 per cent was "life endangered" or "health so impaired that life is a burden." Eighteen per cent of serious terminations is not a small per cent for what some are pleased to style a "harmless" growth. But is that the total number of serious terminations in the whole 300 cases? How many of the patients who were in good conditions when he last saw them will progress to the same stage of the disease in which he saw the 18 per cent?

Fibromyoma of the uterus is a very slow growing tumor. It may gradually progress over a period of twenty years or more. Taking off the first five years, as the tumor may not come under observation then, we have fifteen years of the growth's progress in which the patient is likely to consult a physician. If in a mixed series observed during a period of three years, 18 per cent are found to have reached the serious condition mentioned, what per cent will have reached the same condition when the same series has been observed six years, nine years, twelve years, fifteen years? Of course, it would not be true to assume that because observation of the series for three years showed serious terminations in 18 per cent, observation of the same series for fifteen years would show serious terminations in 90 per cent, but it would be much nearer the truth than the assumption of 18 per cent as the total serious terminations in the 300 cases.

Physicians see but a small number of their fibromyoma cases to the end. The patient in the earlier stages of the disease drifts from one physician to another, helping to swell the list of patients "not



requiring operation" for two or three or more physicians. Later there develop threatening symptoms demanding operation, which is carried out. In the records of the last physician only does the case appear as one "requiring operation." So from this one case there is clear statistical proof that operation is required in only 33 per cent of fibroid cases.

In looking up the records of my fibromyoma cases in hospital, clinic, and private work, I find that 17½ per cent were subjected to operation. Operation was advised in a number of other cases, but just how many I cannot state as the recommendations were not always recorded. In about two-thirds of the total number of fibroid cases seen, there were, at the time no urgent or threatening symptoms. But I do not deceive myself with the idea that, because these patients were in fairly good condition when last seen, they should therefore be classed as fibroid cases that at no time required operation. They could not be properly so classed until traced to the end.

Even in the occasional case which is seen through all stages by one physician, the progress is so slow and the last stage is so far removed from the first, that the relation of cause and effect is in a measure overlooked. If the end came in two or three years, as in cancer, it would be impressive, but the first appearance of the tumor and the ultimate result being so far separated, the connection is somehow lost. The case seems an exceptional one, some new factor at work—the terminal condition can hardly be recognized as due to the harmless fibroid which the patient has carried so many years without particular trouble.

I mention these things because I believe that many are misled by them. The last contribution to this part of the subject that has come to my notice, is that by Thos. Wilson<sup>16</sup> of Birmingham, Eng. He assures us, on practically the same deceptive evidence, viz., the analysis of a series of cases seen for a short time, that of fibroids giving rise to symptoms, only 30 per cent require removal. The remaining 70 per cent require merely watching and minor palliative treatment.

As to what eventually becomes of this 70 per cent he furnishes no proof. However, in the recommendations for the care of them, after giving directions for the relief of various distressing symptoms, he states, "And, finally, operation should be recommended when bleeding gives rise to anemia and does not yield to ordinary treatment; when pain is severe and obstinate; when pressure symptoms, especially retention of urine, occur; when the tumor is rapidly increasing in size; and generally when there is evidence that the health of the patient is becoming impaired"—and he might have added, when the kidneys are damaged; when the cardio-vascular system is seriously affected; when the patient is in bad condition for operation; and when the opera-

tive mortality is necessarily high. I fail to appreciate the advantages of the enumerated conditions secured by waiting.

I am anxious to get at the real significance of the facts presented on this subject. I am not interested in supporting any particular theory. I have fibromyoma cases to treat, however, and I want to know what is best for them, and do not intend to be misled in the matter, one way or another, by taking facts to mean something that they do not mean, if I can avoid it. I am as anxious as any one here to know all the facts against early operation as well as all the facts for it. I would gladly welcome any information establishing the safety of waiting in these cases, for no one feels more than I do, the responsibility of advising a patient in comparatively good health to undergo the dangers of a serious operation.

As to "conclusions," the important thing just now is *your* conclusion, the conclusion of each physician present. For, though such conclusion or opinion may not conclude the subject in a general way, it does conclude it for your patients; to them it is all important, for it means their weal or woe.

Any good that may come from these remarks will come not from the expression of my opinion but from your earnest consideration of the subject. I do not ask you to agree with me. I do not want you to agree with me. What I ask is that you form your own opinion after critical consideration of established facts, not hastily, not too much influenced by the opinions of others, but carefully and seriously, as one who is personally responsible for the welfare of the patient.

My own working rules in this matter, are as follows:

1. A patient who has a small fibroid that is causing no symptoms, requires no treatment for the fibroid. Such tumors are rarely seen. Occasionally one is discovered in the course of an examination for symptoms plainly due to other cause. In such a case I usually do not mention to the patient that she has a fibroid, unless she asks directly concerning it, though I take pains to state the fact and its bearing to the husband or other responsible relative. It seems to me that this is more conducive to the patient's happiness than the explanation to her that she has a growth, some writers to the contrary notwithstanding. To a patient, a "tumor" or "growth" is a gnawing entity. She does not appreciate how little this particular form of growth means, if it remains as it is. With all your explanations to the effect that she "need not worry" and that "it is nothing", there is the lurking knowledge that "it" is there and threatening. And though she apparently casts aside all thought of it, it comes to her in the quiet moments when her thoughts should be of more pleasant things.

If it is "nothing" why burden her with the unpleasant knowledge of it when all useful ends can be as well attained in another way. Such a case furnishes, I think, a well chosen occasion for practical

application of the sentiment, "Where ignorance is bliss, 'tis folly to be wise."

2. A patient has a tumor of moderate size (as large as a fist) causing only slightly troublesome symptoms, which may yield to general tonic treatment, with the addition of uterine astringents (ergotin, stypticin).

She is put on the treatment just mentioned for one to three months—long enough to satisfy me whether the symptoms will subside under this treatment. If so, the treatment is continued as necessary to control the symptoms. By "control" of the symptoms I do not mean just so the patient can manage to get along as a semi-invalid, but to such an extent that they are not noticeable to her, that she is practically a well woman.

If I find the symptoms persist after a satisfactory trial of this treatment, it means that they are due, largely, to the activity of the tumor, and not simply to accompanying pelvic congestion dependent principally on some minor inflammatory trouble or on constipation or on methods of work or on other cause independent of the tumor. The persistence of symptoms, after a satisfactory trial of measures to eliminate symptoms due to other causes, means that the tumor itself is already an active irritant in the pelvis. Not active in the sense that it is necessarily rapidly enlarging or degenerating, but active in the sense that it has not passed into the resting, non-active, clinically cured state, but is working the other way. It is active in the same sense that a persisting appendicitis is active in the quiescent periods between the acute attacks. The difference is that the activity of the fibroid is more insidious, less disturbing for the time being, slower, not published by acute exacerbations—but nevertheless, persistently progressive.

However, before recommending operation in a fibromyoma case because of persistent symptoms, I take pains to make certain that the persistence of the symptoms is due to the tumor, and not to some associated condition or conditions that can be relieved by less dangerous measures.

Having established beyond doubt that the tumor itself is already a continual irritant in the pelvis, I say to the patient:

"There is persistent trouble in spite of the treatment, and this trouble is due to the tumor. There is little chance of its getting better or of its remaining permanently stationary. The strong probability is that it will get progressively worse. And it may at any time get rapidly worse, and develop conditions that would increase many times the danger of the operation which would then be necessary to save your life, if it could be saved. I am satisfied that the danger of operation *now* is much less than the danger of delay."

3. In cases where the tumor is causing symptoms that plainly



cannot be corrected by other measures. I at once recommend operation, without wasting time with the other measures.

What about large tumors without symptoms? I am skeptical on the subject of large tumors without symptoms. They are certainly very scarce. I do not remember having seen any case of large fibromyoma in which careful inquiry did not show some evidence of disturbance from the growth before it had attained a large size—unless the following case, seen recently in consultation with Dr. C. O. C. Max, of St. Louis, could be classed as such.

The patient, a white woman, aged 30, unmarried, noticed in a casual way, about the middle of last February, that the lower abdomen seemed rather larger and firm. Subsequent developments indicate that the tumor must have been of considerable size at that time, probably reaching half way to the umbilicus. Careful inquiry elicited no noticeable evidence of disturbance at that time, not even bladder irritability. As the patient felt well she paid no particular attention to the slight fullness of the abdomen. At the middle of March the menstrual flow was not so free as usual and, for reasons best known to herself, she became frightened and went to a midwife, who March 21, introduced a sound into the uterus and assured the patient there was no pregnancy. For two days she worked and felt well. The second night, however, she had a chill followed by fever and intermittent pains in the abdomen and a bloody flow with clots. The trouble increased and the patient's condition became serious and she called in Dr. Max, who very properly proceeded to empty the infected and partly emptied uterus. But there was not much material to be removed. The fever and pains kept up and the patient's condition became still more serious. It was then that I was asked to see her in consultation. Though it had been only eight days since the onset of decided symptoms, the fibroid uterus was then as high as the umbilicus.

Thinking that possibly the acute infection was of such character that it would quickly subside, permitting a safer operation when the virulence was spent, we treated the case accordingly. But the fever continued high, the abdominal pains increased, the pulse became rapid and the patient, instead of getting better, went from bad to worse. So we were obliged to operate. April 14, in the presence of the acute infection. The specimen furnishes a particularly clear illustration of the danger of a sloughing fibroid, so I brought it for your inspection. The necrotic fibroid has caused a perforation through the uterine wall into the peritoneal cavity.

This was one of those mild cases that "get along comfortably and present no justification for subjecting the patient to the risks of a serious operation." There were no threatening symptoms, in fact, there were no symptoms of any kind that the patient noticed, except

a slight fullness in the lower abdomen. And yet within four weeks the patient was in a most serious condition, and had to be operated on in that condition with the greatly increased risk.

There was a streptococcus infection, causing sloughing of the fibroid, and the large sloughing fibroid had caused perforation of the uterine wall, destroying an area as large as a silver dollar, as here shown. The portion of omentum which covered this opening is also shown. When the adhesions were partially separated, the bloody infected fluid from around the necrotic fibroid poured out into the peritoneal cavity. This gives an idea of the desperate character of the case. The operation was a total hysterectomy. The patient recovered. On account of the extensive infection, involving the peritoneal cavity, we drained both into the vagina and through the abdominal incision.

Returning to the general subject of advice to fibromyoma patients, the three working rules just given very readily indicate in most cases whether the tumor should be let alone or removed. I refer to the general run of cases—the common forms of myoma in patients under ordinary circumstances.

There are, of course, certain exceptional cases in which there must be taken into consideration special conditions—in the fibromyomatous uterus or in the age or physical condition of the patient or in her surrounding circumstances. For example, if the uterus is pregnant and the tumor is of such size and situation that it will probably not interfere with pregnancy and parturition, I would not interfere at that time. If the patient is in the menopause or safely through that period, I would feel justified in leaving some growths that I would not leave in a younger woman. Again, a patient may be in such circumstances that it is important that, for a time, she take no risk, not even a small one, unless absolutely forced into it by the most threatening conditions, as when the patient has small children wholly dependent on her for the time being. Again the distribution of the tumor tissue has, in certain cases, a considerable influence on the decision; for example, a patient presenting several good-sized nodules in the uterine wall can wait with more safety than where the same amount of fibromyomatous growth is collected in one or two large tumors. There are many such special conditions that must be taken into consideration. This is true to such an extent that, in a measure, each case requires particular consideration and decision. This is the reason why it is impossible to formulate rules applicable to all cases.

However, we necessarily, even in the exceptional cases, base our advice largely on some general guiding principles. And it behooves us to be certain that those general principles accord with the facts, (the real facts and not the supposed facts,) as far as the facts are known.

In closing, I wish to emphasize the following points:

1. A fibroid tumor of the uterus, which has reached a size to be appreciated clinically, is a much more serious affection than is generally supposed.

A considerable proportion of the patients develop fatal local conditions, another considerable proportion develop serious distant visceral degenerations, and a large proportion of the remainder (possibly most of them) finally pass into a condition of chronic suffering and invalidism.

2. The progress of the disease is so slow as to be deceptive, many cases taking fifteen to twenty years to reach full development—hence the serious results do not appear in the observation of a series of cases for a few years, a few years constituting but a fraction of the developmental period.

Yet the wide-spread teaching that serious conditions develop in only a very small proportion of the cases, is based largely on just limited observations, recorded and unrecorded. No large series of consecutive cases followed to the end without operation has shown a small mortality.

3. Uterine fibroid kills principally by inducing serious local and general complications, that go down in the mortuary records as the cause of death—hence mortuary records give no indication of the ravages of the disease. It kills secretly and indirectly, but none the less surely.

4. The proportion of the various classes that (a) go on to a fatal termination or (b) become chronic sufferers and invalids or (c) develop no serious symptoms, can be exactly determined only by securing accurate records of a large series of cases, comprising all classes, from the beginning of the trouble to the end.

5. Enough is already known to show that delay is dangerous. Many patients develop fatal conditions, many find operation necessary when in such a state as to make the operation exceedingly dangerous, and some must be refused operation because of advanced complications, nearly all of which loss of life and health could have been prevented by early operation.

6. The chance of satisfactory improvement after the menopause is, speaking generally, more than overbalanced by the frequency of serious degenerative changes and complications.

7. We assume a grave responsibility when we advise a patient to wait until serious symptoms develop before having the tumor removed.

Early operation, under proper conditions, means small risk to the patient. Late operation means great risk.

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SUPRAPUBIC CYSTOTOMY AS A PRELIMINARY TO, AND  
AS A ROUTE FOR THE PERFORMANCE OF A  
CONSIDERABLE NUMBER OF PROSTA-  
TECTOMIES.\*

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This paper does not contemplate a review of the etiology, pathology, symptoms and diagnosis of prostatic growths. Rather it will have to do with the benefits resulting from preliminary suprapubic drainage in the obstructive ammonical, or infective cystites, the removal of calculi, and, in many cases, the immediate or deferred enucleation of the prostate, or the offending portion thereof, through the same route.

Prostatectomy in the last decade has come rapidly into prominence. Like other surgical procedures on organs to which little attention had previously been given, it has rapidly assumed all the features of a fad. The pendulum by the action of extremists has, it seems, been forced beyond the limits of its usual excursion. By reason of the vying efforts of surgeons to devise new methods or routes of attack upon and for the removal of the prostate, the possible preservation of its function, and even the life of the patient has been in many cases, it appears, lost sight of.

In a general way it may be said that the success of operations on organs deeply seated depends upon the knowledge one possesses of their structure, function, location, and relation to other organs, and, as well, the ability of the surgeon to determine the condition and particular portion of the organ involved, together with a perfect familiarity with the route, or routes, by which the organ may be most readily and satisfactorily reached.

Not only does this statement apply in regard to the prostate, but it applies with equal, if not greater force, when it comes to considering the obstructive urinary and systemic results of its overgrowth. Anything short of a perfect appreciation of these features impels many surgeons to at once subject their patients to tedious, life trying operations for the removal of the cause of the obstruction, rather than the life prolonging procedure of establishing vesical rest and drainage—the more trying measure of enucleation being essayed when the patient has reacted from the effects of the obstruction and can be hoped to fairly resist its shock.

It would transcend the limits of this paper to go into a minute

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detailed description of the anatomy and function of the prostate. All that really concerns us here, is the gross anatomy. It will therefore serve our purpose to describe it as a musculo-glandular organ about the size and shape of a horse-chestnut surrounding the first inch and a quarter of the urethra, or neck of the bladder. It is located below and behind the os pubis, above and behind the deep layer of the triangular ligament, in front of the rectum and below and in front of the base of the bladder. It is composed of two lobes and an isthmus, the latter located mainly between the ejaculatory ducts behind and below the floor of the prostatic urethra and below its vesical orifice. It is a sexual organ of a sensory, secretory, and muscular character. On account of its attachments and relations, it is almost immobile. When affected by tumorous growths, by reason of its limitations, they can only enlarge to any considerable extent in the direction of either the rectum or bladder. While in no sense a urinary organ, its principle symptoms when affected are of an obstructive urinary character, i. e., frequent, painful urination, partial or complete retention.

Prostatism, while possible of recognition in its earlier stages by experienced surgeons, as a rule creeps upon the individual insiduously, frequently reaching an advanced stage—the patient having accommodated himself to this or that discomfort many times without consulting his family physician. When compelled to call upon his medical adviser for help, he is usually relieved of his acute retention, or other symptom, and taught the use of the catheter as a measure of relief. The result of such procrastination is that the major portion of the cases falling into the hands of the surgeon are affected not only with this or that form of prostate pathology, but have in addition grave alterations of an obstructive or infective nature in the bladder, ureters, kidneys, and, as well, a pronounced toxicosis attended by gastro-intestinal disturbance and malnutrition.

In order to establish limitations for preliminary supra-pubic cystotomy in this connection, we will divide prostatias as regards their surgical importance into three classes as follows: (1). Those who are between the ages of 45 and 65 years, who pass water voluntarily, are only compelled to urinate once or twice at night, in whom the retained urine is small in amount and does not undergo rapid decomposition changes without bladder irrigations, and who do not reveal albumen and casts upon urinary examination. (2). Those compelled to urinate frequently at night, who suffer from considerable retention, decomposition, and recurring attacks of acute cystitis, who have damaged kidneys from obstructive or infective causes, shown by albumen, casts, and a chronic uremo-septic condition. (3). Those who have passed through, or who have any or all of those features mentioned in class two, plus a sudden complete retention thus creating an emergency which calls for some form of immediate surgical interference in order to prolong the patient's life.

In class one, no claim is made that preliminary urinary drainage is absolutely necessary, but, if doubt exists as to the outcome of severe surgical procedure, time sufficient should be taken to thoroughly prepare the patient for the shock, which in some instances appears to be out of proportion to the character of the operation. If stone be present, a cystotomy might well be the first step to a future prostatectomy. By drainage and bladder irrigations the infected and over worked viscus is given rest and soothed to a degree which allows it to rapidly return as nearly as possible to its normal condition.

In class two, the urgency which exists, in the majority of these cases, is not for the immediate removal of the prostate, but rather a distinct indication for good vesical drainage and rest thus relieving the bladder, ureters and kidneys, which have been mechanically obstructed and possibly infected for years. These cases present a greatly reduced resistance owing to defective elimination and the constant poisonous influence of the uremo-septic products in the blood upon such vital structures as the heart, circulatory, and nervous systems. The hepatic and gastro-intestinal involvement help to bring about the anemia and resulting malnutritive condition. The age of these patients, in itself an important factor, is usually above 65 years. The occasional, or frequent use of the catheter, is their habit. They frequently offer little hope for immediate major surgical shock, but can often be carried successfully through the more serious operation following a cystotomy, a week or ten days being allowed for drainage and the use of tonics, eliminatives, etc., with a view of removal of toxic products and the building up of the vital powers of the patient to a maximum.

In class three, are included those who have been going from bad to worse as noted in class two, and in whom for various reasons, such as recurring acute exacerbations of cystitis or nephritis, attended by sudden and complete retention, an emergency exists which must be met by an immediate surgical measure with a view of giving either temporary or permanent relief. These patients are in no condition to withstand grave surgical shock on account of the extreme prostration, the result of an acute uremo-septicemia engrafted upon the pre-existing chronic toxicosis. Catheter life in most instances has been the rule, and the continuous mechanical and frequent septic results attending the use of this instrument have added their quota to the pathology, and indeed, often precipitated the crisis which creates the imperative demand for immediate operative interference which should be attended by a minimum of shock and intended to only relieve the existing extremity and prolong life. In these cases a prostatectomy by any route and with any form of anaesthesia is almost certain to result fatally. Even a supra-pubic cystotomy rapidly done under infiltration anaesthesia, or with ethyl-chloride, while offering the only hope, is uncertain regarding its prognosis.



In class two, if stone be found to be present, or if the pathology be located in the so-called median, or in the posterior part of the lateral lobes, the tumorous masses bulging into the bladder, and the general condition of the patient is such as to warrant one in believing, that he can withstand some additional shock and the urine is free from septic elements, a general anaesthetic should be administered and a supra-pubic cystotomy rapidly done and the stones removed or the offending portion of the prostate enucleated at once.

After the bladder has been opened it requires but little time to locate and remove stones. The examining finger in the bladder reinforced by the first two fingers of the other hand, or those of an assistant, in the rectum acting as an elevator enables the surgeon to quickly determine whether the operation can more satisfactorily include the enucleation of the growth by this route. The intra-vesical ocular advantages offered by this route also recommend it in those cases in which it is indicated. If it is decided that the operation can safely be extended to include the removal of the prostate or the diseased portion of same, a longitudinal incision about one inch long should be made through the bladder mucous membrane in the median line below, or slightly to one side of the vesical orifice of the urethra and the enucleation proceeded with after the method of Fuller. The cavity from which the mass has been removed may be packed lightly, or, if hemorrhage be considerable, tightly with gauze, a portion of which is allowed to extend out at the lower angle of the belly wound alongside the drainage tube. After twenty-four or forty-eight hours, this may be removed, the drainage tube being left until the urine is free from traces of blood and is normal in other respects. Bladder irrigations should be instituted and maintained to help bring this about. The tube may then be removed and the bladder and belly wound closed by suture or allowed to heal spontaneously.

In class three, there exists as before stated only one indication for surgical interference, and that is an immediate and imperative demand for vesical rest and drainage and to relieve the profound obstructive kidney and systemic disturbance, thus prolonging life. The surgeon who has regard for the reputation of surgery will hesitate many a time, and rightly so, before subjecting his aged, poisoned and enfeebled patient to a major operation with its maximum of shock in order to remove an obstruction, when the effects of that obstruction can better be obviated by a minor operation with a minimum of shock, thus relieving damaged kidneys and enabling the system to not only eliminate poisonous products, but to, in a great measure, overcome the existing dyscrasia. By rapidly making a supra-pubic cystotomy with infiltration or ethyl chloride anaesthesia syphon drainage can be established for a period of from one to two weeks, enabling the patient to regain his usual health and resistance before subjecting him

to the more formidable operation of removal of the prostate. The patient during the interim between operations can, by use of a rubber urinal strapped to his thigh, sit up in a wheel chair, or in many cases be permitted to walk about. During this time the free use of water, urinary antiseptics, mild laxatives and easily digested nutritious food together with bladder irrigations, should be resorted to.

Drainage by the supra-pubic route is to my mind the ideal method for the following reasons: 1st. Drainage is perfect as the water is siphoned off, and by reason of this the tube does not become filled with salts and mucus settlements, as is the case with the perineal tube. 2nd. The tendency of the bladder contractions, should any occur, is not to expel the tube, as in the case of the perineal tube. 3rd. In case the tube is expelled, it can be easily and painlessly replaced. 4th. In case the tube is expelled drainage continues, which is not the case by the perineal route, as the internal sphincter closes allowing the retention of urine necessitating its periodical voidance, requiring bladder work, which we want to avoid. 5th. It admits of bladder irrigations. 6th. It allows rest and subdues chronic inflammation of both bladder and kidneys by removing the continuous intermittent pressure of a decomposed or septic fluid. 7th. It allows the urine to become almost, if not entirely free from septic and decomposition products, thus reducing the hazard of infection from the subsequent operation.

I make no claim that the supra-pubic is the easier route or even the one of choice for the performance of the major portion of prostatectomies. I do claim, that in many cases the immediate demand is for drainage and vesical rest. I prefer the supra-pubic route for this purpose, and if conditions are favorable the prostatectomy can be performed at the same time, although I find but few patients whose interests are not better safeguarded by deferring the prostatectomy until a later date, at which time it can be performed by the route which seems best adapted to the character of the growth.

The plea in this paper is for conservatism in the effort to prolong life in the case of the advanced and extreme prostatic.

Logan Building.

#### DISCUSSION.

Dr. E. G. Mark, of Kansas City: The point regarding the division of the cases into three classes seems to me to be an excellent one. While the operation of supra-pubic cystotomy is advocated as a preliminary one, in a number of cases it is acceptable and possibly indicated as a route for prostatectomy as well. At the same time it seems to me that as a drainage operation it should be left to that class designated in class 3, for these reasons—that in the first class there is no indication for drainage by the supra-pubic route and in the second class the urethra is almost certain to be permeable by a soft

rubber catheter. The possibilities of catheter drainage meet the indications equally as well as cystotomy. The time for prostatectomy is not when the patient has an infected bladder, etc., but when he is entering into prostatic life, when he has not become infected. He is then in the best condition to stand the operation. The indications for supra-pubic prostatectomy in these cases are where the prostate is deeply placed in the perineum, or the growth is intravisceral, or complicated by a large calculus. Certainly in perineal operations which have been so highly recommended by Young and Murphy of Chicago, the rectum is too liable to be injured. In a deep perineum, it requires extremely delicate work to keep from injuring the rectum. In the anterior operation, this unfortunate accident is obviated.

Dr. W. H. Coffey, of Kansas City: This is one of the conditions in which the surgeon has done wonders. We all know that not so many years ago when these old people came to us for relief we gave them a catheter and told them to use it and let them die. Now we are doing a great deal of good for these old people. These cases nearly always have hemorrhoids, so frequently that we can almost call them a constant accompaniment of enlargement of this gland. The point I wish to especially emphasize is in removing the gland, if the rectum should be injured, the most feasible and proper thing to do is to dissect the bowel up to the site of the injury and bringing it down to the anus suture it to your incision at Hellon's white line, or in other words do a modified Whitehead's operation.

Dr. G. Wiley Broome of St. Louis: I commend this paper especially for its conservatism. We are just about to emerge from a very serious crusade against the prostate. The surgical profession in this country, as well as abroad, has been exercising every effort in urging the removal of the prostate for in many instances only slight retention. I have examined about three hundred pathological specimens of the prostate and have learned many things never mentioned in papers written on the subject of prostatectomy. In the first place, there may be a very greatly enlarged prostate which yet may not be the cause of the retention of the urine. The fact that the prostate is enlarged does not particularly mean that it is causing the retention. There are only two lobes to the prostate while it is in a normal condition. After the hyperplastic process is advanced, there are no longer two lobes, the lobes having coalesced into one mass. It is then impossible to enucleate. I like the idea of making a preliminary supra-pubic opening because by so doing you can examine the inside of the bladder carefully and determine whether there is any foreign substance in the bladder. Then you can drain, for the chief thing to accomplish is to remove the residual urine from the bladder and to afford the patient relief from the bladder distress. This will make him comfortable, give him rest and sleep and you will have accomplished every indication.



Although I have examined the subject thoroughly I have never commended routine prostatectomy. When I find that the vesical orifice of the urethra is elevated a considerable distance above the floor of the bladder, which is the condition always present and the cause of the retention in prostatic hypertrophy, I introduce a tube mid-way between the urethra and the rectum and push it up into the bladder behind the prostate. Then I introduce a plunger to clean and draw the urine from the bladder. This tube I leave in situ. I believe the time is coming when there will not be so many prostatectomies made. I believe the day of the routine practice is about over. Young's statement to which one of the speakers referred contains many errors. One is that he preserves the sexual puissance. That is absolutely impossible because the obstructive influences of the prostate are behind the seminal canals. The promise to preserve for the patient the seminal ducts in the prostate, is in my judgment, a hope held before the prostatitics, which they can never realize. After a patient has undergone the operation of prostatectomy all seminal communication between the testicles and the fenile organ is destroyed. Hence the promised puissance becomes a myth.

Dr. J. C. Morfit, of St. Louis: I do not believe in operating on a prostate because it has enlarged, but I do believe that an *obstructing* prostate calls for an operation, whether it is enlarged or not. The worst and most annoying prostate that I have seen was one that was very small, symmetrically enlarged, in which the patient had to use progressively smaller catheter to draw the urine and had to pass all the urine through the catheter. I removed all of the prostate and drained through the perineum. The man is now able to control the passage of urine and has been since ten days after the operation. There are some cases where there is obstruction without infection. Obviously these, when operated on give the best and quickest cures. When complicated by infection we have to modify our technique and treat the sepsis as well as the obstruction. But the sepsis is the paramount condition. The trouble to be overcome makes drainage necessary. Whether we shall drain from above or below, will be a mooted question for some time, but perfect drainage and rest must be procured. Personally I prefer the perineal route. Age has little to do with these cases. An enlarged prostate is quite as serious to an old man as it would be to one half his age.

Dr. E. G. Mark, of Kansas City: I only rise to say that I did not mean to intimate that I would do a wholesale prostatectomy on all patients over the age of forty-five years. I would limit it to those in which we find that there is residuum dependent upon enlargement.

Dr. Beedle of Kansas City: In the first place, I believe that every case requiring prostatectomy is a case by itself for individual consideration as to the most advantageous route for operation. The size of the

growth and irregular development of the formation have a bearing upon the nature of the treatment. We should operate only when operation is absolutely necessary and then only when the case is ripe for this surgical procedure. The results are what count after all, and no surgeon should cater to one preferable route in all cases irrespective of its suitability to the character of the prostatic obstruction. I am inclined to favor cystotomy method which I believe is applicable in the majority of cases permitting favorably of the most essential things to be considered. It permits of the quickest way to reach the prostate, time being of the greatest importance as these old people stand prolonged anesthesia badly. We want as good drainage as possible, and drainage through the perineal route is much better than that through the supra-pubic; again this route gives us direct and complete access to the field of operation, the room for manipulation is better and there is less danger of tearing the rectum if adhesions are very dense, than through supra-pubic cystotomy.

A few points in respect to the operation that I prefer. A short vertical incision down to and through membranous urethra while the levator ani is retracted, with one finger of gloved hand in rectum as a guide, the bowel is safely freed from the tumor; the glove is then removed and same finger used as retractor in the bladder. For several reasons I believe the finger the best form of retractor for this work; the growth is enucleated and drainage tube fixed. I have practiced placing a soft catheter and draining the bladder for several days previous to operation and in connection with internal antiseptic have had my best results.

Dr. C. G. Geiger: The theory has been advanced that better results would be had by drainage through the rectum than by dilating. That is all right if you want your patient to go through life with a fistulous opening. An hypertrophied prostate does not, as a rule, interfere with the urine unless there is hypertrophy of the middle lobe. It is also true that we can have hypertrophy of the two lateral lobes without interference with urination. I think Bottini's operation will meet with greater favor in the future than it has in the past. The middle lobe, when it is hypertrophied, does interfere. In most cases where interference is present, the middle lobe is very much enlarged. It is proper to go in and relieve the infected condition, and, if necessary, open the perineum and enucleate the entire prostatic gland.

Dr. Elam, in closing: I certainly feel gratified at the reception of my paper. I did not contemplate going over the entire field of prostatic surgery, nor of dealing with the technic of the various operations, nor the benefits of one operation over any other, nor do I announce my preference of routes. My paper stuck pretty close to the title. The title was "Supra-pubic Cystotomy as a Preliminary to, and as a Route for the Performance of a Considerable Number of Pros-

tatectomies." The object of my paper was to call attention, not so much to those prostaties who very seldom consult the surgeon or urologist, or those prostaties who, for various reasons, only now and then call in their family physician perhaps for the removal of a little urine, but it was for the purpose of calling attention to the prostaties in whom a considerable amount of urine is retained, and undergoing decomposition, demanding the frequent use of the catheter. As you all know, the more frequently the catheter is used, the greater the chance of infection and for obstructive involvement of the ureters, kidneys, and the system as well, resulting in a chronic uremia, this in turn affecting the vital organs of the body. I claim that drainage is the important thing to consider first. It becomes imperative if there is acute retention and infection, especially if we would prolong the life, comfort and usefulness of the patient. You can remove the prostate later if necessary. The thing to do is to relieve the urgent symptoms, taking your time to remove the cause of the obstruction. As to what Dr. Marks has said, I did not intend to go into the merits of perineal and supra-pubic cystotomy, but will say for his benefit that I expect I will perform as many perineal prostatectomies as I do supra-pubic prostatectomies, yet I have found cases where I could remove the obstructing body almost entire, especially if it consisted of a tumorous mass springing from the so-called middle lobe, and my patients get along with the other lobes until some other time. In three or four instances, I have never had to remove the lateral lobes. I will mention one case just to show the advantages of supra-pubic drainage and letting things take their course. This patient was 76 years of age. He was accustomed to use the catheter occasionally. I was called to see him and found him suffering with acute retention cystitis, nephritis and acute uremo-septic poisoning. I made a supra-pubic cystotomy for drainage. He went two years without any trouble, though his urine occasionally became strong, I was then again called to take his case in charge. I did another operation and he went that time for about nine months. He then used the catheter, and became infected so that it was necessary to open him up again. I then removed the offending prostate. He lived to be over eighty-six years of age. I am satisfied that as a result of these two cystotomies his life was prolonged for a long time. There is a time when this operation is indicated in class two, and that is where there is a uremo-septic condition, where acute retention comes on and infection exists. If you permit septic urine to remain in the bladder you will have chronic septicaemia. These old men do not respond and react to sepsis as younger and full blooded patients do. Acute septicaemia depresses them and they die apparently from asthenia and yet it is in my opinion septicaemia that kills them.



## INTESTINAL AUTOINTOXICATION.\*

BY J. B. NORMAN, M. D., CALIFORNIA, MO.

The conclusions formed by the general practitioner upon any medical subject, must almost of necessity be based upon clinical observation. While they may not always be correct, yet as a whole, they prove or disprove the investigations and theories of the laboratory pathologist, and give practical utility to the truths he discovers. The system of alimentation in health and disease, is universal and demands and should receive the careful consideration of every practitioner either general or special. Digestion, assimilation and nutrition occupy a prominent place in the therapeutics of almost every known malady. It is in disease, that we are interested in the best possible exercise of these functions obtainable under the restricted conditions, and upon the proper exercise of these functions depends in large measure the success or failure of treatment.

The transformation of food products into substances capable of assimilation is a complex process, and any disturbance of its normal equilibrium gives rise to symptoms more or less distressing either in health or disease. The introduction of unsterilized food, water and air into the stomach and intestines, necessarily carries with it many forms of bacteria, where conditions as food, heat and moisture, are most favorable for their development. The normal secretion of the normal digestive juices unquestionably exercises an inhibiting influence on the multiplication and development of the bacteria so introduced. Notwithstanding this inhibiting control, the action of the digestive secretions is not in a true sense, germicidal, but only serves to prevent the rapid multiplication and growth of bacteria.

There are then, normally and at all times in the intestinal canal, a countless number of bacteria whose toxins, absorbed into the circulation, are poisonous to the tissues of the human body. In addition to this, there are mineral and chemical substances, derived from the food and from the secretions themselves, such as potash, biliary coloring matter and biliary salts, which are distinctively poisonous to the tissues. Many of these absorbed by the portal circulation, are destroyed or transformed by the liver, and the remainder or a part of it is eliminated by the kidneys; and the whole quantity is reduced to a residual not incompatible with a fair degree of health. Thus it would appear that Bouchard's statement, "Man is constantly menaced

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\*Read at the annual meeting, Jefferson City, May, 1906.

by the poisons of his own body," is correct, even though it be considered only from the standpoint of intestinal autointoxication.

When, from the ingestion of indigestible food, or from the improper mastication of ordinarily digestible food, the digestive secretions are overtaxed beyond their capacity; or if, from mental worry, nervous shock or traumatism, the equilibrium of the digestive secretions is disturbed; or if, in a sudden change from an active to a sedentary life, the amount of digestive secretions is decreased while the food ingested remains the same in kind and amount, the restraining influence of digestion over the bacteria of the intestinal canal becomes inadequate and with their increased multiplication and virility, toxins are formed beyond the capacity of the liver to destroy and the kidneys to eliminate and we have the tissues of the body poisoned. There follows a train of subjective symptoms as headache, shivering, muscular aching, bitter taste, coated tongue, fever, etc., which we denominate biliousness, or acute intestinal autointoxication. This condition is one with which the general practitioner has to do perhaps more often than any other. It is one due wholly, to a disturbance of the relation between the formation and elimination of intestinal toxins. If from any cause, the permeability of the kidney is decreased or the activity of the liver diminished to a degree that leaves an excess of intestinal toxins, the same condition obtains. After the ingestion of putrid food, as tainted meats, spoiled vegetables, spoiled food of any kind, there follows an anomalous fermentation, a putrefactive process, generating toxins, ptomains and alkaloids, both known and unknown whose effect on the system varies in degree from a simple biliousness to a most virulent ptomain poisoning.

Fortunately the treatment of the conditions I have so far described, in this paper, is both simple and effective. To establish free drainage of the alimentary tract, withhold all foods until such time as the digestive organs seem capable of taking care of it; to decrease fermentation or putrefaction by some bland, reliable intestinal antiseptic, and to restore, if necessary, the activity of the kidneys and liver, result, almost invariably, in a rapid subsidence of all symptoms.

Acute intestinal autointoxication occurring in otherwise healthy individuals, is of such little consequence as to scarcely arouse the consideration of the physician; but when it occurs, as it frequently does, as a complication of a serious and dread disease, it is then well worthy our earnest, most careful thought. In typhoid fever, with the principal, if not the only lesion, located in the intestines, with a temperature above normal and the digestive secretions disturbed or perverted, we have a condition highly favorable to the development of putrefactive germs. The meteorism and tympanites, the malodorous stools, combined with every subjective symptom which attest the presence of intestinal putrefaction at other times, speak, authoritatively of

its presence here. I believe and am fully convinced, that the fever of typhoid fever is a result of the typhoid infection upon which is implanted an intestinal autointoxication due to putrefactive germs. The treatment of typhoid fever is then the treatment of acute intestinal autointoxication, plus the additional treatment of typhoid fever *per se*. Intestinal drainage, intestinal antiseptics, diet and elimination are important therapeutic measures; and experience teaches us, are effective ones.

Laboratory pathologists tell us that intestinal antiseptics are unavailing; that it is utterly impossible to render the intestinal canal aseptic. Because we cannot clean out and kill every germ in the intestinal tract, it does not follow, that by suitable treatment, we cannot inhibit the growth and virility of putrefactive germs, or even the bacillus typhosis. Upon what other hypothesis can you explain the rapid abatement of all subjective symptoms, the uniform decline of temperature, and the disappearance of tympanites and malodorous discharge which invariably follow the administration of reliable intestinal antiseptics, laxatives and careful feeding? With a mortality far below that of any other line of treatment with which I am familiar, results argue more eloquently than words.

What is true of typhoid fever, is in a lesser degree true of any continued fever. Continuous hyperpyrexia alone disturbs and perverts the digestive function and exercises an influence favorable to the development of intestinal germs. It follows then that in every continued fever, there is an element of intestinal autointoxication with which nature and the physician must reckon. The alimentiveness of Americans as a race, the character of their food, their methods of eating and their habits of life are prone to beget disturbances of the digestive function. Because of this there are formed in the intestinal tube of some people, indol, acetone and various other toxins to an amount which continuously and perpetually taxes the powers of the digestive system to destroy or eliminate. The constant presence of these products of indigestion and putrefaction in the digestive tube, perverts the normal functions of the digestive organs and ultimately produces a chronic inflammation of the gastric or intestinal mucosa. The increased amount of poisons which the blood receives from the intestines as a sequence of these changes, falls to the lot of the kidneys to eliminate, and this too in addition to the work of the kidneys in eliminating the products of general metabolism of the body. The increased work thus thrown upon the kidneys, perhaps combined with an unusual irritating quality of the poisons generated in the intestines, keeps the Malpighians bodies and tubules in a more or less constant state of irritation and ultimately develop a true inflammation or nephritis. The frequent association of gastro-intestinal



disease with nephritis, in my opinion gives support to the theory of a causal relation.

Time nor space will not permit me to discuss the many diseases toward which intestinal intoxication bears either a causal or a complicative relation. As a mere suggestion, I may mention uremia, mental diseases, convulsions, epilepsy, migraine, neuritis, cystitis, skin diseases, malignancy and many others.

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## ETIOLOGY OF ACCESSORY SINUS DISEASE.\*

BY FAYETTE C. EWING, M. D., ST. LOUIS.

The accessory sinus include the frontal, maxillary, ethmoid, and sphenoid. The causes of their diseases may be classified, as Common and Special.

Common, as applying to such factors as are productive of disease in each and all; special, as bearing upon the pathology of one or more but not all. Their classification has been hit upon for the sake of brevity, and in the belief that in the limited time at my disposal it will enable my hearers to carry in mind the essential, and most important of the contributory causes of such diseases as these cavities are subject to, thus elucidating the diagnosis and treatment which will be ably discussed by my successors in this symposium. Furthermore, in emphasizing the causes common to all, by placing them together, I may hope to impress the general practitioner, (whose aggregate of knowledge so much supersedes that of the mere specialist) with what may be most serviceable hereafter in his hurried life.

The constant accompaniment of all sinus disease is *inflammation*. But, inflammation is a condition not a cause. To name inflammation as a disease and direct against it our therapy would be to violate the basic principle of all therapy, which aims at the removal of the cause. Inflammation then, though it must be reckoned with, in diagnosis and treatment, is secondary, though indissoluble from any consideration of the etiology of sinus disease. Inflammation in the sinus may arise, and most frequently does, from a like condition in the nasal chambers. It may have its source in a simple rhinitis by extension since the lining membranes of the sinus are continuous with that of the nasal passages. The strumous and tuberculous diatheses rendering the individual more subject to rhinitis becomes influential in the greater liability to sinusitis both through frequency of rhinitis and in the special susceptibility of the sinus membrane. Pyogenic and micro-organisms operating in the nasal-passages, may infect these cavities by continuity and contiguity of tissue or by direct lodgment. Doubtless many

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unclassified germs, of which the nose is full, play a part in cases in which the etiology is obscure. The exanthemata, diphtheria, and atrophic rhinitis must be considered as causative of such suppurations. Metastasis and actinomycosis, may, though very rarely, account for them. Worms and insects may find their way into the innocent body of the sinus, after the manner of original sin, acting as the first offence. Foreign bodies and micro-organisms may be washed in by the douche or blown in by the inflator. It is not uncommon for syphilitic necrosis to be set up in the sinus or find its way by extension. The same disease process may occasion sinus disease by dislodgment of bone adjacent to their outlets blocking the passages. Various malformations, interfering with drainage, and the circulation of air, tend to produce inflammatory process. Obstruction, from whatever cause, is one of the most potent of all factors in the development of inflammatory conditions. Other causes of obstruction than those enumerated are hyperplastic rhinitis and tumors, such as myxomata, fibroid and osteomata.

The condition known as mucocele may be formed in any of the sinuses, and is due to prolonged catarrhal inflammation, resulting in cell proliferation, and the formation of a myxomatous mass enclosed in a thin sac. It is of infrequent occurrence. It is possible for systemic poisonings from minerals and metals to affect any of the sinuses.

Having enumerated the known causes of disease in all the sinuses, I shall now take them up separately and dwell more particularly upon the etiology special to one or more, but not to all four.

From a pathological point of view the most important is the maxillary sinus. Owing to its peculiarities and eccentricities of construction and anatomical relationship to adjacent parts, it is the one most frequently subject to chronic disease. It is a closed cavity except for one, sometimes two, small openings near the top which lead into the middle meatus of the nose. These openings are named *ostium maxillare*, and *ostium maxillare accessorius*. Catarrhal accumulations in the antrum can find no natural outlet except by overflow through these passages, and when this occurs there must of necessity be retention almost equivalent to the capacity of the cavity. Sometimes these openings are situated abnormally high, even above the level of the floor of the orbit. The position of the *ostium maxillare* is in direct line with the drippings of pus from a diseased ethmoid or frontal sinus the downflow from which easily enters into the antrum, setting up disease therein. Even if the pus does not find its way into the antrum it acts as an irritant to the mucous membrane lining the small opening of and about the *ostium maxillare* producing turgescence and obstruction with a resultant sinusitis. The antrum is subject to great variations in shape, differing materially on opposite sides in the same individual, sometimes adding to the difficulties of drainage. It is by no means

smooth within, the line of molars projecting well up into the floor, while the superior dental nerves and vessels traverse the spaces to their distribution. Where branches of the superior dental nerve sometimes pass over the floor the mucous membrane is exceedingly thin which explains the excruciating pain sometimes experienced in comparatively slight accumulations of fluid. Perhaps the teeth should be reckoned the most frequent single cause of antral disease, and it behooves the practitioner to look well to them. If he have not a thorough knowledge of their anatomical relationship to the antrum he should seek advice. A decayed root, or obscure snag may be creative of much mischief. It is possible for foreign bodies to find their way into the antrum, which when once in are naturally retained.

Emphysema is sometimes set up in the antrum, and though it is a rare affection when present it is of much importance. It is caused by the generation of gases by decayed teeth. From the teeth may also arise the so-called dentigerous cyst. Other cysts may develop from the enlargement of the follicles lining the cavity.

In the frontal sinus, none of the causes of disease to which I have alluded are as important in children as in adults. Before the 20th year since the cavity is not fully developed the prominence of this sinus renders its walls particularly susceptible to compound fracture adding to its possible injury and obstruction over the others. On the other hand its position, with natural drainage from the bottom, saves it from suppuration which often would otherwise occur. It is frequently attacked by the catarrhal process, in connection with rhinitis, which proceeds no further.

In connection with the ethmoid sinus, there is little to add to the aggregate of etiologic factors mentioned in my general summary. However, some consideration of its peculiarities of anatomical construction and regional relationship should be accorded, adding to its individual susceptibility from causes that may also operate in the pathology of the others. The ethmoid cells anteriorly may be bathed in the pus from the frontal sinus while the posterior cells by their proximity to the sphenoid sinus may be similarly affected in disease of this cavity. Under certain conditions pus from the maxillary antrum may penetrate into the anterior cells, all of which explains the obscurity of symptoms when only one of the other three sinuses is suspected as their source. Obscure, offensive and obdurate discharges that have been diagnosed as rhinitis, are in reality due to suppurating ethmoiditis. The pronouncedly cellular formation of the ethmoid renders its mucous membrane very thin, and closely connected to the bony framework, making it more susceptible to injury and catarrhal disease than the kind we usually have to deal with. Furthermore, the construction is such that pus is not freely discharged from the honey-comb like chambers. Basal fracture of the skull may involve the ethmoid,



while a blow on the nose may fracture the vomer, loosening it from its connection, with injury and exposure of the cells. Violent intranasal operations, particularly upon the septum may produce a like result. Phosphorous poisoning has been known to center upon these cells.

The sphenoid sinus has no etiology of disease peculiar to itself. All causes leading to inflammatory conditions in it have been mentioned in my general classification.

Situated as it is in the center of the head, and far from the possibility of direct exposure, its disease is almost always secondary and by extension following disease of the other sinuses, or in the nasal or post-nasal spaces, pus may gain entrance into it by rupture of the wall separating it from the ethmoid sinus.

450 Century Building.

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## THE DIAGNOSIS OF INFLAMMATORY DISEASES OF THE ACCESSORY SINUSES OF THE NOSE.\*

BY GREENFIELD SLUDER, M. D., ST. LOUIS.

By disease of the accessory sinuses of the nose is usually meant, suppuration of one or more of these sinuses and it is of this I shall speak in particular.

Acute inflammation of high grade, involving the accessory sinuses of the nose, one or more, with or without obstruction to their drainage, is very apt to be accompanied by more or less pain. Should the drainage be obstructed the pain will be very great.

The history of the case and the location of the pain are sometimes of great service in making a diagnosis.

Often the history will be given of a profuse, purulent discharge that had existed several days when it suddenly stopped. The pain which had been insignificant up to that time suddenly became intense. (It is usually described as neuralgia). Should the obstruction be complete the history will go to show that the pain increased in severity for still a short time when it in turn stopped. The discharge from the nose will then have become re-established by way of its natural outlet into the nose, or one of the walls of the involved sinus will be found to have given away producing an orbital phlegmon, or a meningitis according as it opened into the orbit or the cranium.

The location and character of the pain are frequently of service in making the diagnosis but not invariably so.

The pain produced by the disease of the frontal sinus is usually referred to the immediate frontal region of the side involved. It may, however, be referred to the lateral aspect of the brow. In acute cases

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it is cyclical. In old cases it may be constant. The pain begins some time in the morning. In cases of medium severity it may begin at half past seven or eight o'clock and reach its height by nine or half past and, slowly subsiding, disappear by eleven to twelve o'clock. As the severity of the case increases the pain will begin earlier and stop later; beginning even at four A. M. and not stopping until eight P. M. with the marked and constant characteristic, however, that the night will be free of pain and usually spent in restful sleep. I think that this is the condition that has sometimes been given the name of "Sun-pain" and thought to be supraorbital neuralgia and of malarial origin.

Frontal sinus pain in general may very readily be confounded with the pain of supraorbital neuralgia because of the two structures being anatomically so near to each other. In this connection I should like specially to mention a point that has been of great service to me in this differential diagnosis.

Normally the supraorbital nerve lying in its notch at the junction of the inner with the middle third of the upper line of the orbit, is distinctly more sensitive to pressure than the bone of the upper, inner angle of the orbit; namely, that portion which is made by the frontal sinus; and this is still more marked in supraorbital neuralgia according to its degree of severity.

In disease of the frontal sinus, especially the acute inflammatory troubles this relationship is markedly altered, in fact reversed. The orbital wall of the frontal sinus then becomes very much more sensitive than the supraorbital nerve. The only exception that I have found to this rule is in skulls of unusually great thickness of bone. In these the pain of a closed empyema may be very great and at the same time the sinus externally may betray no tenderness to ordinary pressure.

The pain produced by disease of the anterior ethmoid is usually spoken of as being behind the eye.

The pain produced by disease of the antrum is referred to the cheek. It may be absent, however, if the anterior bony wall be thick so that the canals for the upper dental nerves as they descend within this wall lie sufficiently deep to give the nerves protection from the antrum inflammation.

The pain produced by disease of the posterior ethmoid is usually referred to the parietal eminence; sometimes to the temple.

The pain produced by disease of the sphenoid is usually referred to the occiput; sometimes to the region of the mastoid.

The diagnosis within the nose is made by finding the pus and locating its origin.

The most easily recognizable form of this is that in which the diseased sinus pours forth a stream of pus continuously it appearing in

the nose at, or near, the natural outlet of the sinus, being readily visible by an ordinary rhinoscopic examination.

This picture, however, assumes that the bony relationships within the nose are normal; that there is plenty of room for the turbinates and no obstructing hypertrophies nor deviated septum, nor polyps. Under these conditions pus from the frontal sinus will pour from under the middle turbinate at a point very near its anterior end. Pus from the anterior labyrinth of the ethmoid will pour from under the middle turbinate at a point near its middle. Pus from the antrum of Highmore will pour, usually, from under the posterior third of the middle turbinate and frequently be visible only by posterior rhinoscopic examination. Pus from the posterior labyrinth of the ethmoid will pour over the posterior third of the middle turbinate—that is from between the middle and upper turbinates. Pus from the sphenoid pours from a point above the upper turbinate and posterior to it.

Pus from the posterior ethmoid and sphenoid is most frequently seen from behind—most frequently flows into the throat. That from the sphenoid will flow entirely down the posterior wall of the nasopharynx. In this connection may come the question whether this does not come from the median recess of the pharyngeal tonsil. If the median recess be the origin of the pus the stream will be found, as it is followed upward in the post-nasal glass, to stop at this point.

The diagnosis becomes more difficult in the presence of almost any change that departs from the normal.

An hypertrophy of the anterior end of the middle turbinate may close the middle meatus anteriorly in such a way that pus from the frontal sinus does not appear near the anterior portion but is carried backwards so as to appear in common with that of the ethmoid, or antrum, or to simulate either or both of these if they are not suppurating. (This same picture would be produced by the simple lapping of the turbinate tight on to the lateral wall with or without hypertrophy.)

A suppurating antrum may simulate in appearance a suppurating frontal should the opening of the antrum lie in the forward upper part of the hiatus semilunarius, as it sometimes does instead of what is the most frequent site, the posterior third of the middle meatus.

A swelling of the posterior tip of the middle turbinate will frequently make difficult the separation of posterior ethmoidal from sphenoidal suppuration.

A general swelling of the middle turbinate may change the olfactory fissure into a cul-de-sac opening posteriorly which will behave as an additional accessory sinus simulating a post-ethmoidal or sphenoidal suppuration, or these combined. So then it becomes desirable to have a routine procedure for the differentiation of one of these from the others. The fact of the frontal, anterior ethmoid and the antrum of Highmore entering the nose by way of the middle meatus is the



anatomical explanation of how these may be confounded one with the other, as pus poured forth from one of these sinuses, or all of them together, may appear simply as pus from the middle meatus.

Some rhinologists use trans-illumination (the light placed in the mouth) as a diagnostic means to include or exclude, usually the antrum of Highmore, in this group. This has been unsatisfactory in my hands and seems to me must needs be unsatisfactory because the thickness of the bony walls may differ very greatly in the two sides of the same face with corresponding diminution of the size of the cavity within. The thick walled cavity will, of course, appear darker than the thin walled cavity and may still be perfectly free of pus within, or the thin walled cavity may contain pus and still appear no darker than the thick walled cavity without pus. So it seems to me, that the far more trustworthy method is the experimental puncture of the antrum at the point under the middle of the lower turbinate. A solution of boric acid is then washed through which brings out the pus if it be there, or returns clean if it be not there. The patient is examined again in the course of a few minutes, ten, fifteen or twenty minutes to see if the middle meatus still shows the pus. If the antrum be the only cavity suppurating, the middle meatus will not show pus again at the end of this short time, as it requires more time than this to fill it up to the point of overflowing. So that should pus be found in the meatus soon after the washing of the antrum it must needs come from the ethmoid or the frontal—their outlets being placed so as to permit an uninterrupted flow. The opening of the antrum on the other hand is placed near its top so that it requires time to fill up and overflow after having been emptied. This method has the advantage also of being curative in cases of recent suppuration; that is if the suppuration be of less than three months standing. In cases of recent suppuration without headache a differentiation of frontal from ethmoidal suppuration may often be neglected as these, too, may be expected to heal without radical interference. Should they not heal, the anterior two-thirds of the middle turbinate is then to be removed, which will lay bare the openings to the frontal and ethmoid. A probe may then be introduced into each of these cavities and on its withdrawal pus may be seen to follow it or not.

This method has also come to be known as the conservative treatment for frontal and ethmoidal suppuration.

In these cases the outflow of pus is assumed to be profuse and of not longer than a few months standing.

In cases of long standing and especially in those in which the discharge has become scanty and dries into a crust the diagnosis may be very difficult. The effect usually produced under these conditions is that of the destruction of the epithelium and shrinking of the soft parts and frequently of the turbinate bones.

Add to this picture the stench of decomposition (ozena) and you have a condition which stimulates very closely atrophic rhinitis. Then atrophic rhinitis, of long standing, often involves one or more of the accessory sinuses.

A differential diagnosis may sometimes be made by finding the trouble limited to one nostril which according to my understanding is an impossibility in atrophic rhinitis proper. The atrophy following an ancient sinus suppuration has, in my experience, been limited to the area bathed by the pus, for example if the pus be poured into the middle meatus and from there of course gravitating into the lower meatus the tissues in the middle and lower meatus will be found to be atrophic and to have lost their ciliated epithelium. On the other hand the tissues in the olfactory fissure not being bathed by the pus will be found normal.

The accessory sinuses of the nose may, though rarely, be inflamed to a considerable degree and so far as discoverable remain dry or secrete a small amount of thin, watery liquid apparently containing little or no mucous. The diagnosis of this condition is sometimes possible by finding an inflamed area surrounding the opening of the sinus with or without the secretion as the case may be.

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## THE TREATMENT OF DISEASES OF THE ACCESSORY SINUSES.\*

BY M. A. GOLDSTEIN, M. D., ST. LOUIS.

The last decade has marked a new epoch of activity in intra-nasal surgery. This advancement has been especially noticeable in the disposal of the suppurative processes of the accessory sinuses. The *bête noir* of the rhinologist has been the long array of chronic suppurations as they occur so frequently in our temperate zones, suppurations induced by repeated coryzas, and various infectious processes.

The marked progress which has been made in the surgery of these areas has followed closely on the more intimate knowledge of the anatomy of the accessory spaces to the nose and the research and demonstration of the site of purulent foci lodged in these cells and sinuses.

Perhaps the most classical monograph to aid in the development of the work on the accessory sinuses was that of Grunewald, "Die Lehre von den Naseneiterungen." To this we must add the contributions of Onodi and Hajek on the anatomy and surgical technique, the brilliant original work of Killian and Jansen, and the practical modifications of technique as suggested by our own colleagues, Coakley, Behrens, Myleš, and others, until today the sequelae of nasal suppuration ap-

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pear to us an open field, depending only on careful diagnosis and expert surgery for its radical cure.

In discussing the question of the treatment of the nasal sinuses, it will be well to differentiate what symptom-complex demands radical surgical intervention, and what class of cases can be satisfactorily disposed of without radical measures. In this enthusiastic and progressive age of surgery, there is a temptation to conduct our work along extreme and radical lines where simpler and more conservative treatment may be available.

I have taken as my task, therefore, to epitomize and group in the suppurative processes in each of the accessory sinuses the class of cases which may be treated along conservative lines on the one hand, and those which demand radical surgery on the other.

*The Maxillary Sinus.*—In acute empyema of the maxillary antrum, dependent on an acute nasal infection, or extending from an infected tooth through the alveolar process, where no destruction of the mucosa of the antrum has as yet occurred, where neither new tissue formation, granulation, nor neoplasms have developed; and where it is simply a question of draining the accumulated pus from the antrum; the simpler plan of trephining the alveolar process and flushing the antrum with antiseptic solutions will often prove effective in establishing definite cure. The technique is so simple that the patient should be given the benefit of this conservative treatment until more radical measures are proven necessary.

An equally simple technique is that of exploratory puncture through the nasal wall, usually made about the juncture of the anterior and middle third of the inferior turbinate near the natural nasal orifice of the maxillary sinus. The antrum may be flushed out through such an opening, and the character of the pus or washings from the cavity should be carefully examined. If this simple flushing of the antrum, either through the alveolar process or through the nasal openings, does not show evidence of relief of the suppurative condition, better and freer drainage must be established. The thin nasal wall of the antrum, through which probes, curettes, and canulas can be rapidly passed should be resected and the treatment of the antrum carried on through this artificial fenestrum. This procedure includes the preliminary removal of the anterior two-thirds of the inferior turbinate.

This constitutes to my mind, the limitations of conservative surgery of the maxillary sinuses. Should further steps be necessary to effect a cure, the radical operation through the canine fossa and malar ridge, and through curettement of the contents and mucosa of the antrum, should be undertaken. Radical surgery of the antrum is indicated where necrosis exists; where new growths have formed; where



constitutional dyscrasia, as of tuberculosis, syphilis, osteomyelitis, may be present; or where an extensive multiple sinusitis has occurred.

*The Ethmoid Cells.*—The ethmoid cells, because of their anatomical proximity to the frontal antrum and sphenoidal sinuses, and their close association with the orbit, the cribriform plate, and the cerebral meninges, and their intimate relationship to the turbinal tissues, are more frequently involved as suppurative foci than any of the other accessory spaces. We may gather from statistics of acute inflammations of the nose that the ethmoid cells are involved in over 70 per cent of all cases. They represent the connecting link between the nasal structures proper and all of the adjacent sinuses and deeper structures anatomically constituting the nasal fossae. In view of their very frequent involvement it is a satisfaction to the rhinologist to know that the ethmoid cells have the special advantage of being more easily accessible to simple surgical procedures than are any of the other sinuses; they may be opened, curetted, and thoroughly drained, without extensive surgery or external openings.

Even though the accessibility of these cells is simple, it is well to consider conservatism before a more direct attack and curettement of these areas is undertaken. There are many cases of acute suppurative rhinitis associated with involvement of the ethmoid cells which yield definitely and simply to topical treatment. It would be an extreme measure to urge the penetration of the ethmoid cells in each case where ethmoiditis can be diagnosed. In all simple acute ethmoiditis, therefore treatment should be directed toward simple drainage effected by means of cocaine, adrenalin, hot antiseptic douches if necessary, and astringent applications. If these fail to abort or relieve the acute inflammation and suppuration, the more radical treatment should be resorted to. This is accomplished by the removal of the anterior end or anterior two-thirds, if necessary, of the middle turbinate, after which the anterior cells of the ethmoid may be easily exposed, curetted, and treated.

The posterior ethmoid cells, because of their less accessible location and their close relation to the sphenoid sinus, are more difficult to reach by the simple intra-nasal route. The question of the external operation, as far as the ethmoid cells are concerned, is only to be considered when they are associated with suppurative processes of the frontal sinuses.

*The Frontal Sinuses.*—As is the case in the other sinuses, the treatment of frontal sinusitis may be defined, according to the character of the inflammation, and the intensity and extent of invasion, into conservative and radical technique. The results of those who have had the greatest experience in the treatment of frontal sinusitis show that in over 80 per cent. of acute frontal sinusitis complete recovery after intra-nasal treatment, including removal of the middle turbinate

to allow of free drainage from the naso-frontal duct into the middle meatus, the use of hot douches, and the topical application of cocaine and adrenalin. Coakley presents the following symptoms demanding external opening of the frontal sinus:

*First.* Edema and redness of the upper eyelid, accompanied by throbbing pain over the sinus, provided they show a tendency to increase in severity for more than 24 hours after the resection of the anterior third of the middle turbinate and the thorough contraction of the mucous membrane in the middle meatus by means of local applications of adrenalin and cocaine.

*Second.* Marked prolapse of the orbital wall of the frontal sinus.

*Third.* Displacement of the globe of the eye downwards and outwards accompanied by diplopia.

*Fourth.* The development of a fistula at the upper angle of the orbit as evidenced by redness, great swelling, and fluctuation in this region.

*Fifth.* Intense supra-orbital and frontal pain which cannot be relieved by establishing adequate drainage through the naso-frontal duct with a tendency to an elevation in temperature and symptoms of beginning meningeal inflammation."

Chronic suppurative frontal sinusitis presupposes in its pathology the involvement of some of the neighboring sinuses, most usually the posterior ethmoid cells, because of their intimate relationship and because of their greater frequency and exposure to suppuration.

In the chronic suppurations, there is perhaps less opportunity to secure effective results by the intra-nasal route than may be obtained in the acute cases. But even here, all conservative measures should be given a fair trial before resorting to radical surgery. Not only is the radical surgery of the frontal sinus to be considered from the standpoint of a capital operation, but the cosmetic feature is one of much desideratum to the patient. Patients will yield to the external operation for the relief of suppuration of the frontal sinus only as a last resort. Then, too, we must not lose sight of the juxta-position of the frontal lobe of the brain, and the possibility of meningeal involvement of this area.

In chronic suppurative frontal sinusitis, the radical operation is indicated where acute exacerbations occur, or whenever any of the symptoms enumerated under the acute forms designated for radical invasion, develop; where polypi or other neoplasms are formed, and in short in all cases where a liberal trial by means of intra-nasal drainage fails to cure.

In the radical operation of the frontal sinus, two forms of technique are today recognized as the most satisfactory surgical procedures, and those affording the most definite results. These are

(a) The open operation, as suggested and described by Coakley, in which the same technique is employed as that used in the radical mastoid operation. The frontal sinus is opened and treated like a mastoid, and the wound packed from above downward thus promoting granulations about the bottom of the naso-frontal duct and the narrowest part of the cavity, and allowing the wound to close by granulations.

(b) The Killian operation, whereby not only the frontal sinus, but also the ethmoid cells, are entirely obliterated.

Much care and judgment is necessary to classify and select those of our cases demanding radical measures and those which can be properly treated along more conservative lines. And it will frequently tax the judgment and professional skill of the operator to decide this point sharply.

*The Sphenoid Sinus.*—Of all the accessory sinuses, the sphenoid cells are most difficult of surgical intervention, because of their greater inaccessibility by the intra-nasal route, their deep location in the nasal fossae, and their closer relations to the cranial cavity. Like those of the other sinuses, however, suppuration of the sphenoid sinus may be treated both conservatively and radically.

The conservative treatment consists of the establishment of free drainage through the sphenoid ostium and the removal of any nasal obstructions due to septal deformity or hypertrophied turbinate. It is rare to find sphenoid suppuration existing *per se*, the usual accompaniment being an empyema of the ethmoid, frontal or maxillary sinus. In the majority of cases, clinically, therefore, when the sphenoid is involved, we are dealing with a multiple sinusitis, and our surgical technique must also include these areas.

In acute suppurative invasion of the sphenoid sinus, a very large percentage of cases reported by many observers yield definitely to conservative intra-nasal treatment.

It is in chronic empyemata of the sphenoid sinus, especially when associated with similar conditions in the ethmoid, frontal or antral cells, that radical surgery is called for.

Radical surgery of the sphenoid should include any technique whereby the anterior wall is removed and the interior of the sinus exposed, whether such surgery be accomplished by the intra-nasal route where the ethmoid labyrinth is included, or by way of the frontal sinus through the ethmoid cells, or through the antrum of Highmore and the ethmoid cells.

In the selection of proper surgical intervention, the operator is influenced by the pathology and clinical features of each individual case. For example, if sphenoid empyema exists concomitantly with suppuration in the maxillary antrum and ethmoid cells, the route naturally to be selected for reaching the sphenoid area will be the



interior operation of the antrum of Highmore and through the ethmoid cells. If, on the other hand, a multiple sinusitis exists involving the sphenoid, posterior ethmoid and frontal sinuses, the operative technique by choice will be that of the exterior operation on the frontal sinus through the ethmoid cells to the sphenoid sinus.

It is scarcely the province of this paper to discuss in detail the various forms of surgical technique, but I have attempted to present the clinical conditions met with in the various forms of suppurative sinusitis, and to indicate the plan of treatment which the present consensus of opinion deems most logical and most effective.

Whether conservative or radical measures are adopted, the one surgical fundamental principle which underlies all of our operative work in the nasal fossae is that of free, liberal, and mechanically proper drainage.

If we can satisfactorily flush and drain the maxillary antrum through an alveolar puncture or by way of the anatomical nasal opening, many of our simple, uncomplicated empyemata of the maxillary antrum will be cured without more difficult technique; if we can readily find the sphenoid ostium and can secure an unobstructed drain either through the natural or artificially enlarged ostium, more difficult surgery may often be unnecessary; if we can cleanly remove the anterior portion of the middle turbinate without encroaching on the ethmoid bulla and without causing subsequent cicatrization of tissue about that natural drainage canal, the hiatus semilunaris, we will simplify the treatment of many of our cases of ethmoiditis; if the topography and anatomical relations of the naso-frontal duct to the turbinal areas remain fairly normal, many of our cases of frontal sinusitis will be amenable to treatment by the more conservative intra-nasal route than by the aggressive, radical and deforming external operation.

In conclusion, permit me to present, as the summary of some of our best authorities in this field and those who have had most experience with sinus work, that 80 per cent. of all sinus cases can be cured by the intra-nasal conservative route. With the tendency always present in every field of surgery to espouse radical measures wherever the occasion presents itself, I would emphasize the importance of giving the concluding statistics, just quoted careful attention; and would urge that our patients be given as much consideration as our surgical ambitions.

## OCULAR SIGNS AND COMPLICATIONS OF ACCESSORY SINUS DISEASE.\*

BY JOHN GREEN, JR., M. D., ST. LOUIS.

It has been recognized for many years that certain gross abnormalities of the eye and orbit—for example, orbital abscess and atrophy of the optic nerve—might originate in suppurative inflammations and neoplasms of the accessory sinuses of the nose; but it is only within the past decade that ophthalmologists have come to appreciate the important role of sinus disease in many less obvious organic and functional ocular troubles. With a better understanding of the relationship between sinus and ocular disease, the conviction has been growing that certain ocular conditions of obscure etiology which, in the past, have been vaguely characterized as “idiopathic” or “rheumatic” can, in many instances, be traced to sinus trouble. In view of these relations, the question arises whether the separation of the specialties of ophthalmology and rhinology—a separation pretty generally accomplished in the larger centres of population—has been altogether a move in the right direction. At first thought, it might seem perfectly rational to insist on the association in the practice of a single individual of two regions standing in such intimate anatomic relationship as the eye and nose. But when we take into consideration the difference in the character of most of the problems that confront the rhinologist and ophthalmologist, demanding a high degree of technical skill of a widely different character, I believe we are justified in assuming that the greatest good will come from a separation of these specialties, provided the ophthalmologist constantly bears in mind that he is dealing, not merely with an eye that accidentally happens to be in the body, but with a human organism possessed of a nose and nasal sinuses; and, on the other hand, that the rhinologist does not forget that the orbit, the ocular muscles and the eyeball are within speaking distance of his sacred precincts.

I will first review briefly the more important ocular conditions associated with disease of the accessory sinuses and then allude to the ocular signs of sinus trouble which might lead one unskilled in rhinoscopic examination to suspect the existence of sinus disease. I am aware that various affections of the nose, as, for example, adenoids and certain forms of rhinitis may give rise to ocular signs similar to those

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\*Read before the St. Louis Medical Society, meeting of March 17, 1906.

of sinusitis, so that a diagnosis based solely on such signs can at best only be presumptive. However, as the determination of the existence of nasal disease is the important point, we should be satisfied to leave the determination of its precise character to the rhinologist.

*Affections of the orbit.* It is probable that the majority of inflammations of the orbit originate in a sinusitis. The clinical picture is the typical one of orbital phlegmon, with swelling of the lids, chemosis and exophthalmus. It is sometimes possible to determine the particular sinus involved by the direction in which the globe is displaced. Thus, downward and outward dislocation is often significant of disease of the frontal sinus. Dislocation of the globe without orbital inflammation may be occasioned by a chronic distension of the sinus walls. Variations in the degree of exophthalmus are rather characteristic and are to be explained, as pointed out by Posey, as a consequence of variations in the patulency of the sinus orifices.

*Affections of the optic nerve.* The optic nerve is especially prone to be implicated in sphenoiditis and posterior ethmoiditis, though the involvement is usually slight. If the sinus inflammation is prolonged and severe, a true retrobulbar inflammation of the nerve may develop. Tumors of the sphenoid do not ordinarily involve the optic nerve but may, exceptionally, cause progressive atrophy from pressure.

*Affections of the extraocular muscles.* Complete paralysis of all ocular muscles may, in rare instances, be traced to an apical cellulitis of the orbit, of sphenoidal or ethmoidal origin. Of much greater frequency are partial paralyses of a single muscle or group of muscles. Such pareses may occur in both suppurative and catarrhal conditions of the sinuses. They are to be explained as the result of participation by the muscle in the inflammation of the contiguous sinus or by reason of direct implication of the nerves as they enter the orbit.

*Affections of the lachrymal apparatus.* An empyaema of one of the sinuses may empty into the lachrymal sack. More frequently the pus discharges into the tissues surrounding the sack, there giving rise to the so-called prelachrymal abscess. Such cases very closely resemble true abscess of the sack by reason of the distension of the latter from closure of its openings. The differential diagnosis is established by the failure of the probe to release pus when passed into the sack.

*Affections of the lids.* A moderate edema of the lids, most marked in the morning and on bending forward is frequently associated with sinus disease. It is often unilateral, corresponding to the side of the affected sinus and is apt to be confined to the nasal half of the upper lid. Inflammation of the lid margin associated with chronic conjunctivitis is often observed in conjunction with sinusitis.

*Affections of the cornea.* Herpetic-like blisters of the cornea in consequence of implication of the fifth nerve as it passes along the



outer wall of the sphenoidal sinus have been recorded by Posey and Ellinger.

*Affections of the choroid.* Risley and Fish have described cases which seem to indicate that certain choroidal inflammations may originate from diseased sinuses. It has been suggested that sinusitis, by causing congestion and spasm of the ciliary muscle, might give rise to myopia. Such claims, as well as those which ascribe certain cataracts and glaucomas to sinus disease, can only be regarded as pleasant flights of the ophthalmo-rhinological imagination.

Not infrequently the first intimation of sinus trouble is indicated by symptoms referred to the eyes. St. Clair Thomson states: "Many cases present themselves in the first instance to the ophthalmologist, so much do the eye symptoms induced overshadow all others." It behooves the latter, therefore, to be on his guard lest he misinterpret symptoms of which some are scarcely to be distinguished from those of uncorrected ametropia or muscular imbalance. Many patients with sinus disease are, indeed, also the subjects of refractive anomalies in which case the symptoms are partly ocular in origin. However exact may be our correction of the optical error, it will not alone avail to free these patients of their disability. I am of the opinion that in such cases correction of the refraction should be deferred until the sinus trouble is well under control.

One fact that should always be borne in mind is that the ocular symptoms of sinusitis are characterized by marked variations in intensity. I have one day seen such a patient in the greatest misery with severe hemicrania, copious lachrymation and intense photophobia, accompanied by fever. The following day not a sign or symptom remained. This, I assume, is another indication of variation in the degree of patulency of the sinus openings.

A distinguishing feature of the headache of sinusitis is that it occurs in the morning. It may be a continuous pain with exacerbations or partake of the character of a neuralgia or hemicrania. The location of the pain is often significant of the sinus affected. With regard to the value of headache as a diagnostic sign and its frequency in nasal trouble, I agree with the statement of St. Clair Thomson that "the various forms of headache, hemicrania and neuralgia may be symptomatic of sinus affection and I am inclined to think that in adults nasal suppurative is only less frequent as a cause than errors of refraction."

A valuable sign of frontal and ethmoidal affection whether suppurative or catarrhal is the pain on pressure against the upper inner wall of the orbit, in the region of the pulley of the superior oblique. This area is often exquisitely sensitive, so much so that the slightest pressure will cause the patient to wince. Its value as a diagnostic sign is increased by the absence or at least the diminished pain on pres-

sure over the opposite fronto-ethmoidal region. In frontal sinusitis the skin at this site is often reddened and swollen.

In connection with other symptoms the presence of edema of the lid, of the character described above, may be of diagnostic significance. That this sign may be evoked by intranasal disease other than sinusitis, I have recently had exemplified in a case now under the care of Dr. H. W. Loeb and myself.

Asthenopia persisting after the correction of the refraction or muscular imbalance should not, as is often the case, be ascribed to neurasthenia or to the "inborn cussedness" of the individual, but should at once suggest a rhinoscopic examination. Your patient may declare positively that there is no nasal trouble, a statement which should not in the least swerve you from your purpose. In a certain proportion of cases, sinus disease will be revealed. The asthenopia appears to be due to accommodative weakness and insufficiency of the internal rectus. It is remarkable how quickly such patients regain ability to use the eyes on institution of appropriate nasal treatment.

A unilateral edema of the nerve of which the ophthalmoscopic signs are blurring of the papillary edge and dilatation of the retinal veins may be the sole sign of a posterior ethmoiditis or sphenoiditis. In such cases visual tests under diminished illumination will often determine a notable falling off in vision on the affected side. Perimetric examination may show central and paracentral relative scotomata or concentric contraction of the field.

In the presence of unilateral exophthalmus, nasal examination should always be made. The same procedure is advisable in choroidal troubles and opacities in the vitreous of which the cause is not obvious.

I believe that in some cases an association of significant ocular and other symptoms may be of even greater value in determining the presence of sinus trouble than a rhinoscopic examination.

#### DISCUSSION.

Dr. W. B. Shields:—We know that the majority of these cases are due to infection. Grunewalt said that of 99 cases of disease of the maxillary antrum which he examined, 73 were due to infections of the nose, only 14 could be traced to infection from decayed teeth. He also says that periostitis of the alveolar processes may produce antrum disease. Typhoid fever, syphilis and tuberculosis are the most common causes of the general diseases. Harke, of Wiesbaden, found that 6 out of 37 people dying of infectious diseases had disease of the antrum of Highmore and other nasal cavities. He also lays stress upon the dangers that may follow blowing the nose too hard, and in my estimation the using of sprays with too great force in influenza or other infections may produce disease of that kind. Another writer lays

stress upon the fact that syphilis is often an etiological factor and reports of syphilitic ethmoiditis in which he removed the sequestra and the patient got well. In one case I removed the sequestra after having removed the anterior end of the middle turbinate and the patient got well. I think chronic sphenoiditis is more common than was once supposed. I have seen three cases within the last two years. Dr. Myer, of New York, has reported a number of cases due to the introduction of the influenza bacillus, and other micro-organisms. The majority of cases of disease of the antrum of Highmore are due to a purulent ethmoiditis. Disease of the antrum in my opinion in the majority of cases is secondary to ethmoidal trouble. By the natural anatomical formation of the parts the pus gets into the antrum through the meatus. In the last year I had a case in which a tooth was the cause of extension into the ethmoidal cells, a suborbital abscess forming. An external opening was made, the ethmoidal cells curetted and after nine months of laborious and constant treatment the patient has recovered.

I do not think that atrophic rhinitis causes suppuration of the accessory cavities. Grunewalt has reported a number of cases of atrophic rhinitis on one side, nothing on the other side, and states that in every case there was a purulent discharge from some other sinus. Following his idea I have found that those cases I have seen were due to disease of some other sinus. Adenoids also may cause disease of other cavities, especially the sphenoidal.

Dr. J. E. Jennings:—On account of the very close relationship of the eye to the nose, eye symptoms may be the first to make their appearance. Two classes of sinus cases present these symptoms; first, a large number where there are no nasal signs. Perhaps there may be headache, dull pain or neuralgia which the patient refers to the eye and consults the eye specialist. The oculist hears of this pain in the head and as it is a common symptom of disease of the eye he will look over the refraction and muscle balance. It is a good rule to follow that if these patients do not improve in a week or two we should examine into the condition of the sinus. In the second class of cases, where there is a considerable amount of pent up pus very striking eye symptoms may be observed as exophthalmus, atrophy of the optic nerve, etc.

Dr. J. C. Buckwalter:—The question arises, how do the sinuses become infected? I am of the opinion that the micro-organisms are always present in the sinus. Given an acute rhinitis the ostium of the sinuses is usually closed, the air in the sinuses becomes rarefied, there follows increased circulation in the mucous membrane, lymph is thrown out, forming a medium for the growth of bacteria.

Dr. F. L. Henderson:—It has taken the general practitioner many years to appreciate the fact that headaches are dependent upon ocular



conditions, and it has taken too long for the oculist and the general practitioner to appreciate the fact that many of these headaches are due to sinus trouble. I know of no article that has been of more value to me than the contribution by Dr. Ewing and Dr. Sluder as to the dependence of headaches upon sinus disease, read several years ago before the American Ophthalmological Society. In this connection I would like to cite one case in my own experience. Last summer a man came to me with a history of continuous headache covering seven years. He told me that if he did not soon get some relief he would not be responsible for the consequences. The history revealed the fact that he had been under the care of an oculist during the whole period, two years under one, three years under another and the last two years under a third, all men of the highest standing and men in whom I have the greatest confidence, so I told him I felt convinced the trouble did not lie in his eyes at all. I said if at the end of a week I could not locate the trouble I would discharge him. After testing his refraction I gave him a prescription to change his glasses. He got no relief, and after questioning him I made up my mind he had a sinusitis. I gave him a letter to Dr. Sluder and last week Dr. Sluder informed me that our friend had not had a headache for three months.

I do not want to reflect on the gentlemen who had this case, for I am convinced that many cases I have had and did not cure, might have been cured had I sent the patients to the rhinologist. However, I believe the general practitioner should always send these headache cases to the eye man first.

Dr. Charles Shattinger:—I wish to ask one or all of the gentlemen about one point that has not been made quite clear, i. e., as to the diagnosis and the influence of this disease in producing headaches when there is no pus present. I would like to know how best to recognize these cases and what sort of symptoms would be likely to be produced aside from the headaches, for in this class of patients it would be most difficult to differentiate whether the condition is due to sinus disease or to ocular trouble.

Dr. Shields:—I do not like to take issue with so many but in regard to the pain in sinus disease it has been conclusively shown that it is not due to the rarefaction of the air but is caused by the increased pressure due to the putriferous gases generated by pus, and retention of these gases. A patient suffering from a chronic inflammation of the frontal sinus does not suffer while in a prone position, but upon arising the pus drops into the infundibulum. If you let the pus out the gas escapes and the pain disappears.

Dr. John Green, Jr., in closing:—Some years ago I had under my care a man, 18 years of age, who complained of headache, inability to use the eyes and other symptoms that might be ascribed to refractive

or muscular error. I made a careful estimation of the refraction and prescribed glasses. The patient's condition improved somewhat but from time to time he would have very acute headaches, and for periods of days together he would be entirely miserable, apparently worse off than before he consulted me. I saw him during one of these attacks and found tenderness on pressure over the pulley of the superior oblique and concluded he was suffering from nasal trouble. Dr. Sauer found swollen turbinates and purulent ethmoiditis. He removed the middle turbinate, instituted drainage and complete relief followed. Since then the patient has had absolutely no headache and has discarded his glasses. Another case: A young woman of twenty-two, with moderate hyperopia, had been under my care for a number of years, with recurrent headaches and various signs of asthenopia. I never could find any tenderness over the fronto-ethmoidal region but other signs led me to suspect nasal trouble. Dr. Sauer found hypertrophy of both middle turbinates and large adenoids. This was not a case of sinus disease but it had produced the typical ocular symptoms. The correction of the nasal trouble was followed by complete relief from the headaches. She had no return.

Dr. Goldstein, in closing.—In opening the ethmoid cells the danger of operative technic can be eliminated by discarding the sharp curette, except in breaking down the thin, friable tissue of the inter-ethmoidal cells, the operation continued with small rongeur forceps, working outward and avoiding the ethmoid plate. As to the possibility of encroaching upon the orbit, the rational procedure is to remove enough of the inferior lower turbinate to give a free field for operation. With the turbinate out of the way and the field clear the nasal wall of the antrum can be more easily attacked and the technique is a simple affair. The external operation referred to as the Caldwell-Luc operation on the antrum has been generally discarded for it includes an opening of the external wall above the alveolar process and the opening of the nasal wall of the antrum. The same results may be effected, and the same ability to reach every portion of the interior of the antrum may be found in the removal of the nasal wall of the antrum, and that today is the operation of preference when a more radical encroachment into the antrum is indicated.

The majority of cases of sinusitis are inflammatory and suppurative. Infrequently there are cases of sinusitis that are the result of neoplasms filling the sinus, or the encroachment of the tissues of the nares. The first is usually diagnosed by the pressure symptoms and the peculiar location of the pain. The encroachment of the tissues of the nose may easily be determined on nasal inspection.

A chronic sinusitis of the antrum that does not yield to treatment by its natural drainage and vent through the alveolar process, or through the nose, is evidently of such a pathological nature that more

radical operation is necessary. I would then think there was a thickened mucosa that would go on indefinitely. It is in just these cases that I would urge radical operation. Coakley urges this in the frontal sinus. In his radical operation, entering the frontal sinus from above, he leaves no vestige of mucosa in the area, and he claims that every bit of it must be stripped away to obtain an absolute cure.

As to the diagnosis, I would call attention to one point and that is the publication this month of a paper by Dr. Mosher, of Boston. He has done some brilliant work in the use of the x-ray. He presents the work of many months, giving the pictures of his x-ray work on the sinus. These are perhaps more definite for diagnostic work than the transillumination method.

Dr. Ewing, in closing:—Dr. Shields has taken issue with me on the question of atrophic rhinitis as a cause of sinusitis. I did not mean to say that it necessarily caused an acute active suppuration but, in the case of so radical a process as atrophic rhinitis, it seems natural that it should extend and infect the antrum of Highmore, producing a form of inflammation. Dr. Shields mentioned that the teeth caused fourteen per cent of the cases. I stated in my paper that the teeth were the most common cause. He quoted statistics showing that out of 99 cases 14 were due to the teeth. The rest, I judge, would include all other causes; thus, my experience would seem to stand even on his figures. He believes that the ethmoid is almost always the cause of antrum disease. I do not. He also declares that the antrum is not the most common of the sinuses affected. I simply spoke from my own experience.

I confess to some prejudice against suppurating necrosing ethmoiditis. It has been said that we get from Europe in culture only what we take there. This may apply to ethmoiditis. I did not take ethmoiditis with me, and I did not find very much of it there. When I was in the London Throat Hospital Woakes was including necrosing ethmoiditis in everything. This sensation of dead bone, so appreciable to him, was not discoverable to his colleagues and students. Their failure he prescribed to lack of tactile sensibility. Here is the trouble with many physicians, and particularly specialists. They are too much inclined to accentuate little things. They get an idea and think it divine, then push it to the point of iniquity. To them desire leads the newly formed idea out of its swaddling clothes into full-fledged truth.

Now, I wish to state most candidly that these remarks are intended in now way to reflect on Dr. Shields. I only want to confess my prejudice against the assertion that suppurating or necrosing ethmoiditis is anything like as common as antrum or frontal sinusitis. I frequently encounter acute inflammation in both the frontal and maxillary sinuses and chronic inflammation in the latter. The others I find infrequently diseased.



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## EDITORIAL.

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### INCREASING OUR MEMBERSHIP.

An opportunity which we feel will bear important results for the welfare of the association by increasing our membership has been presented and we hope every member will realize that this increase depends upon co-operation, for under no other conditions could the desired growth be attained.

At a recent meeting of the executive committee, the president and secretary present, arrangements were completed with the secretary of the American Medical Association which will place a number of experienced men under the direction of the officers of the state association for the purpose of canvassing the state by counties in a systematic effort to increase the membership of existing societies and to organize new societies in those counties now in affiliation. The canvassers will visit each councillor district, working under the direction of the councillors, call upon every physician who is eligible for membership and assist the councillor in organizing new societies. In counties now organized they will work with the councillor and the officers and members of the county societies in an effort to bring in every reputable physician in the county.

Heretofore we have depended upon the councillors alone. They have labored faithfully and with great energy and have been materially assisted by the state secretary in the work of forming new county societies, with the result that out of the one hundred and fifteen counties in the state ninety-nine are organized. The remaining sixteen should be brought into affiliation and it can be done now. To do this we would have every member at once manifest a spirit of enthusiasm and agitate the benefits, privileges and necessities of organi-

zation until every reputable physician in every county has joined the association.

Each member has a duty to perform and it should be a pleasant duty. Let each one then seek a non-member and impress upon him the importance of joining the association. No good man should remain outside the representative medical society in his district. Membership in the county medical society is a duty he owes to himself, to his profession and to society.

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### GOOD WORK.

At a recent meeting of the Cass County Medical Society the county representative in the state legislature was the guest of the evening. By invitation of the society he attended the meeting and addressed the members on the subject of medical legislation pointing out the best methods of securing the passage of bills introduced by the profession, and promising his support to such measures.

This must have been a particularly interesting meeting for the members in Cass county. Just now when we are endeavoring to secure needed legislation, every avenue should be utilized through which influence can be brought to bear upon members of the legislature. We would like to see every county society devote a meeting to a similar purpose. Invite the candidates for representatives from your county to attend your meetings and ask them to join you in your effort to secure the passage of bills to be introduced. Explain to them the necessity for such legislation as a new medical practice act, a law to make criminal abortion a felony, a pure food law that will protect an unthinking and ignorant public from swallowing poisonous nostrums without a knowledge of their contents, and other measures to be introduced looking to improvement in our medical and sanitary laws.

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### STATE SANITARIUM FOR INCIPIENT TUBERCULOSIS.

On August 15th last the corner stone of the new sanitarium for the treatment of incipient tuberculosis was laid. More than 500 physicians from all parts of the state were present. Governor Folk delivered a characteristic address and said that one of the pleasantest duties he had to perform was to sign the bill providing for this institution. Dr. William Porter, of St. Louis, also addressed the assembly. He quoted figures showing the annual economic loss to the state at the present death rate from tuberculosis and the saving which will be effected when the sanitarium is in full operation. He estimated that at present there are 20,000 cases of tuberculosis in Missouri, entailing a loss of \$24,000,000 annually. Forty per cent. of these cases can be saved. This means a saving of \$9,000,000 annually to the state.

But untold good will be done by restoring to health some who were marked for the grave and by educating the people to protect themselves from infection. Missouri must not permit this institution to fail in its mission and the legislature should appropriate a liberal sum of money for maintaining the work now about to begin.

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### HOME FOR THE ST. LOUIS MEDICAL SOCIETY.

On September 15th, the St. Louis Medical Society will dedicate and occupy its new building adjoining the St. Louis Medical Library Association building.

For almost seventy years the St. Louis Medical Society has existed without a home of its own. For many years meetings were held in the rooms of the Board of Education, but new quarters in a more convenient location in the central part of the city stimulated a greater attendance and excited more interest in the work of the society. The convenience of the new quarters greatly exceeded their adaptability and therefore rooms were secured in the Medical Library Association building. It soon became evident that these small, unsuitable rooms were inadequate to accommodate the attendance, and the society convinced that it was large enough, and old enough, and powerful enough to own its own home, decided to erect a building of its own.

The building is constructed in amphitheater form, with comfortable seats arranged in circular rows, centering on the presiding officer's rostrum. It is well lighted and handsomely furnished with adequate facilities for ventilating and heating. It has a seating capacity of 175 which can be doubled, if necessary, for special occasions.

For the last ten years the society has shown evidences of new life, but its prospects have never been brighter than at present. The membership is increasing at an unprecedented rate; the character of the scientific work of its members is on a constantly rising plane; enthusiasm, vigor and optimism prevail and the members are working disinterestedly for the good of the whole society.

Under the influence of the new home, with a larger membership, with earnest work and complete harmony, the present happy condition is but an index of what we may expect from the St. Louis Medical Society.

The program committee has on hand scientific material for eight of the fifteen remaining meetings in this year and it promises the members a series of snappy meetings with papers and discussions of a high order.

J. C. M.

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### ST. LOUIS MEDICAL JOURNALS COMBINE.

The *St. Louis Medical and Surgical Journal* has combined with the *Medical Mirror*. This merger removes the oldest monthly medical



journal from the field. It was established in 1843 and for many years held high rank among the medical journals of this country. It was edited at different times by some of the most brilliant men in the local profession. Dr. Dumesnil, it is stated, will have an interest in the *Medical Mirror*.

The first number of the *West Virginia Medical Journal* has appeared, adding one more to the number of state associations which publish their transactions in journal form.

We are pleased with the appearance of this new publication and extend our warm congratulations and best wishes for a long, successful and useful life. For the first year it will be published bi-monthly. Commencing with July, 1907, it will be published monthly.

#### MEDICAL ASSOCIATION OF THE SOUTHWEST.

When the State Associations of Missouri, Texas, Kansas, Arkansas, Oklahoma and Indian Territory met this summer, each one endorsed a movement looking toward the consummation of the idea expressed at a late meeting of the American Medical Association, which was to divide the United States into groups or districts and organize in each a district association which would stand in the relation of an ally to the A. M. A. Each state appointed a committee of five to act on this committee. Monday, July 16th, at 10 a. m., the committee met in parlor S. Midland Hotel, Kansas City, and organized by electing Dr. F. J. Lutz, of St. Louis, temporary chairman, and Dr. F. H. Clark, of El Reno, Okla., temporary secretary. A lengthy discussion regarding the necessity for such an organization was taken part in by every one present.

The following members were present: Drs. J. E. Gilcreest, Gainesville, Tex.; T. E. Holland, Hot Springs, Ark.; J. A. Lightfoot, Texarkana, Ark.; J. B. Bolton, Eureka Springs, Ark.; C. E. Bowers, Wichita, Kas.; Geo. M. Gray, Kansas City, Kas.; M. F. Jarrett, Fort Scott, Kas.; H. L. Alkire, Topeka, Kas.; Frank J. Lutz, St. Louis, Mo.; Chas. Wood Fassett, St. Joseph, Mo.; Jabez N. Jackson, Kansas City, Mo.; B. F. Fortner, Vinita, Ind. Ter.; A. L. Blesh, Guthrie, Okla.; and F. H. Clark, El Reno, Okla.

A large amount of routine business was attended to, the name chosen being "The Medical Association of the Southwest." The meeting is to be an annual one, to be held in the fall, and the initial meeting at Oklahoma City early in October. The exact date is to be fixed as soon as possible. The Committee on Constitution, which consists of Drs. Jackson, Bowers, Gilcreest, Lightfoot and Blesh, were instructed to draw up declaration of principles to be presented to the committee and a constitution to be presented to the general meeting of the association. The following is the declaration:

*To the Medical Profession of the Southwest:*

By virtue of the authority delegated to us by our several state associations, to consider the advisability of the organization of a medical association of the Southwest and to define its purpose, scope and sphere of action, we your committee, in pursuance of such instruction, this day met, and beg leave to submit the following conclusions: that the time is now opportune for the formation of a medical association of the Southwest, and respectfully urge that in consideration of the fact that in the territory comprised by the states of Missouri, Kansas, Arkansas, Oklahoma, Indian Territory and Texas are engaged in the active practice of the profession of medicine, between 15,000 and 20,000 of as bright and intelligent physicians as can be found anywhere; who, because of the natural limitations of the state association on the one hand and the magnitude of the American Medical Association on the other, lack the proper opportunity for the full development of their powers, that the formation of an association of the above mentioned states will materially aid in developing this latent talent, and thus advance the standard of scientific medicine in the whole Nation.

We believe that the membership of this association should be limited to those members of the profession who are in good standing in their respective state associations.

We believe that an association of this kind will satisfactorily fill the present existing hiatus between the state association on the one hand and the A. M. A. on the other, occupying a field peculiarly its own, adding increased effectiveness to the work of the one and at the same time training talent to adorn the other.

We would respectfully call the attention of the profession of the great Southwest to the fact that this step is in harmony with the idea expressed at the late meeting of the A. M. A., and in its constitution (Sec. 7) of dividing the United States into districts, so as to make its work more effective and more truly representative of the whole body of the profession of the United States.

We would especially call the attention of the profession to the fact that this association is not to be organized in opposition to, but rather in harmony with all existing regular associations.

We recommend that the name of this organization be The Medical Association of the Southwest.

We invite the careful consideration of the medical profession of the states above mentioned, to the reasons given herein, and if they meet with their approval, extend a cordial invitation to them to join with us in making this, as it of right should be, one of the strongest working medical bodies in the United States.

A. L. BLESCH,  
JABEZ N. JACKSON,  
J. A. LIGHTFOOT,  
J. E. GILCREEST,  
C. E. BOWERS,  
Committee.

After the adoption of the Declaration of Principles, which was unanimous, the committee completed the temporary organization by electing Drs. J. T. Wilson, Sherman, Tex.; Marion King, Texarkana, Ark.; P. S. Mitchell, Iola, Kas., and C. S. Bobo, Norman, Okla., temporary vice-president, and Dr. H. C. Todd, Oklahoma City, chairman of Committee of Arrangements.

A committee on program was appointed, consisting of Drs. J. E. Gilcreest, H. K. Alkire, J. D. Bolton, F. J. Lutz and F. H. Clark.

The program committee was instructed to provide a program for two days, and to divide the work into sections. Dr. H. L. Alkire, chairman of the Section on Eye, Ear, Nose and Throat; Dr. J. E. Gilcreest on Surgery, and Dr. J. D. Bolton on General Medicine.

A Committee on Publication was appointed as follows: Dr. Chas. Wood Fassett, St. Joseph; Dr. T. E. Holland, Hot Springs; Dr. M. F. Jarrett, Fort Scott; Dr. M. M. Smith, Austin; Dr. A. L. Blesh, Guthrie. This committee will make a report at the first meeting, and a recommendation as to the best method of publishing the transactions of the association.

The secretary was instructed to send a copy of the Declaration of Principles to every physician eligible to membership in the states comprising this district, and to urge them to attend the initial meeting.

A rising vote of thanks was tendered Dr. Jabez N. Jackson for his efforts in behalf of the new organization and for his generous entertainment of the committee, after which the committee adjourned to meet on the evening preceding the first meeting of the association at Oklahoma City.

F. H. CLARK, Secretary-Treasurer.

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The nineteenth annual meeting of the Medical Society of the Missouri Valley will be held in Council Bluffs, Iowa, Thursday and Friday, September 6 and 7. The sessions in Council Bluffs, the birthplace of the society, are always highly successful, scientifically and socially. Special railroad rates will be in effect within a radius of 100 miles of Council Bluffs.



## COUNTY SOCIETY NOTES

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### CHARITON COUNTY MEDICAL SOCIETY.

Chariton County Medical Society met at Brunswick on July 26th. On motion the resolution presented by Dr. Pearse at the last meeting of the state association and adopted by the association was adopted by this society. The secretary was instructed to furnish a roster of the membership to the prominent newspapers in the county for publication. Dr. Wallace reported a case of intussusception and described the operation as performed in a New York hospital. This description and report of the case was very interesting and instructive.

Dr. Hawkins reported a case of incontinence of urine existing for three years in a child seven years old. The subject of cholera infantum was discussed, Dr. J. H. P. Baker opening the discussion.

Dr. Austin reported the action taken by the committee on legislation and public health at the meeting held in St. Louis.

W. L. BAKER, M. D. Reporter.

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### CLINTON COUNTY MEDICAL SOCIETY.

The Clinton County Medical Society met in Plattsburg, August 7, with a fair attendance of the members. This was an open meeting and a number of clergymen were present. Dr. John Sturgis read a paper on "The Abortionist."

Dr. John Kay read a paper upon the same subject with special reference to its historical and legal aspects. Both papers were freely discussed by all present.

Adjourned to meet in Plattsburg, September 4.

E. W. COLLEY, M. D., Secretary.

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### DAVIESS COUNTY MEDICAL SOCIETY.

Daviess County Medical Society met in Gallatin, Tuesday, August 14.

Dr. H. E. Songer read a very interesting paper entitled "Whither are we Drifting in Therapeutics?" This brought out a very liberal discussion from every one present.

The remainder of the time was taken up in reports of interesting cases.

The next meeting will be held on the second Tuesday in November.

H. E. SONGER, M. D., Reporter.

## DEKALB COUNTY MEDICAL SOCIETY.

The first meeting of DeKalb County Medical Society was held at Maysville under the supervision of the district councillor, Dr. W. E. McKinley, and proceeded to organize the county medical society. The following officers were elected: President, Dr. H. P. Yeater; vice-president, Dr. J. C. Guinn; secretary and treasurer, Dr. R. A. Evans. Drs. G. W. Whitely and J. W. Conard of Gentry County Medical Society were also present and assisted in the organization of the society.

Dr. McKinley and Dr. Whitely addressed the meeting and earnestly set forth the benefits and privileges as well as the necessity for organized effort on the part of physicians. The meeting was a very enthusiastic one and DeKalb County Medical Society promises to be one of the best working bodies in the association.

R. A. EVANS, M. D., Secretary.

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## GENTRY COUNTY MEDICAL SOCIETY.

Gentry County Medical Society met in the office of Dr. P. W. Smith at Albany on August 14th and spent a profitable two hours listening to the reading of a paper on "Entero-Colitis" by Dr. J. W. Conard and a paper by G. W. Whitely on "Typhlitis and Perityphlitis, and their Relation to Appendicitis with the Therapeutic Indications." A general discussion followed the reading of these papers.

Interest in the society is constantly growing and at this meeting each member promised to redouble his efforts to bring in as many new members as possible and to urge better attendance at the meetings.

The next meeting will be held at Darlington in the office of J. L. Burgess.

G. W. WHITELEY, M. D., Reporter.

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## HOLT COUNTY MEDICAL SOCIETY.

Holt County Medical Society met at Forest City, July 12th. Dr. Proud read a paper on infant foods and infant feeding. Dr. J. M. Davis read a paper on atypical forms of typhoid fever with particular reference to unusual conditions met with in the Missouri River bottom.

The names of Dr. Hogan and Dr. Minton were added to the committee appointed to arrange for a special meeting at Big Lake sometime in September. The secretary will notify all members of the date of this meeting when arrangements are completed.

J. F. CHANDER, M. D., Secretary.

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## HOWARD COUNTY MEDICAL SOCIETY.

Howard County Medical Society met in the office of the secretary at Fayette on August 3rd. Dr. Paul C. Smith presented a very inter-

esting case of anasarca presumably the result of heart disease and aortic aneurism. Dr. Smith also reported a case of entero-colitis in a child one year old.

The committee appointed to draft resolutions on the death of Dr. Edwin C. Heller, of Harrisburg, reported as follows:

Resolved, that while we bow submissively to the Divine will we feel that in the death of Dr. Edwin C. Heller we have lost a personal friend and that Boone and Howard counties have lost an eminent physician and surgeon.

Dr. Edwin C. Heller was born at Wytheville, Va., in 1844. He was educated in Virginia and graduated at the Virginia Medical College at Richmond, Va., in 1859. His Missouri State certificate bears date of March, 1870. He had been engaged in practice in Virginia, Kansas City, Fayette and Harrisburg, Mo.

C. W. WATTS, M. D., Reporter.

#### LINN COUNTY MEDICAL SOCIETY

The July meeting was held in Marceline on July 10th. Dr. C. D. Stratton read a paper on dysentery.

Drs. J. H. Perrin and A. W. Knott of Marceline were elected to membership. The following amendments to the by-laws were read and held over for the next meeting:

"Resolved, that Article 5, Section 1 of constitution be changed to read bi-monthly instead of quarterly and at such place as members may choose.

"Also that Section 11 be changed to read on 'Friday nearest the full moon in January, March, May, July, September and November.'"

The following members were appointed to read papers at the next meeting: Dr. E. D. Standly of Linneus, subject, "Typhoid Fever"; Dr. J. H. Perrin of Marceline, subject, "Cerebro Spinal Meningitis"; Dr. A. C. Pettijohn of Brookfield, subject, "Value of Medical Legislation."

F. W. BURKE, M. D., Secretary.

#### NEW MADRID COUNTY MEDICAL SOCIETY.

New Madrid County Medical Society met in regular session Thursday, August 2nd. at New Madrid. Dr. O'Bannon reported a case of eclampsia with fatal result to the mother. Dr. Timberman reported a case of dead fetus delivered with the membranes intact. Dr. Sparhawk reported a case of threatened abortion. These cases were freely discussed by the members.

Dr. Sparhawk read a paper on "Hernia."

The next meeting of the society will be held at Marston. October 4th.

W. J. SPARHAWK, M. D., Reporter.



## BOOK REVIEWS

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THE PSYCHIC TREATMENT OF NERVOUS DISORDERS. By Dr. Paul DuBois, Professor of Neuropathology, University of Berne. Translated by Smith Ely Jelliffe, M. D., Ph. D., and William A. White, M. D. 8vo., cloth; 471 pages. Price \$3.00 net. Funk & Wagnalls Company: New York and London. 1906.

This English translation by Jelliffe and White of DuBois' well-known book deserves to receive in this country the same degree of popularity it met with in France. It is a book that many have been waiting for. It presents in detail the methods of one of the most skillful advocates of what may be termed mental therapeutics. The book consists of a psychological introduction, written in a simple and easily understood manner, upon which the author is supposed to base his psychotherapy. This introduction is interesting, not on this account, but because it is so pleasingly written, and because it contains so much evidence that the author regards his psychology as a thing lying close to the every-day working plan of a neurologist. Of course it is easily seen that, even with all the author's attempts at explanation objectively, the fact is impressed more and more upon the reader that, in the main, the author has been successful in his treatment, not because his methods are based upon a correct appreciation of the psychology of the thing, but because his personality contains within itself just those elements which make his patients want to do as he says, and forces them to see their cases in the light he wishes them to do. This book is recommended to all neurologists, as well as to those who have any sort of interest in the more advanced methods in use in neurological therapeutics. Especially should those read this book who still believe in the force of mystery, in the terrors of the large spark, and in the buzz of the static machine. To such, the truth and frankness of this book will appeal as an interesting variation to the self-deception which a long use of their methods produces.

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MODERN CLINICAL MEDICINE. VOL. I. INFECTIOUS DISEASES. VOL. II. DISEASES OF METABOLISM AND OF THE BLOOD, ANIMAL PARASITES. Translated from "Die Deutsche Klinik" by Julius L. Salinger, M. D. New York and London: D. Appleton & Co. 1906.

It was inevitable that the excellent series of monographs by German scientists and clinicians, published under the title of "Die Deutsche Klinik," should be promptly translated. These treatises, written by men who are absolutely the masters, each in his field, form to-day the best presentation of their respective subjects. Among the contributors to these two volumes we see: Klemperer, Liebermeister,

Ortner, Löffler, Heubner, J. C. Wilson of Philadelphia, Eichorst, v. Noorden, Naunyn, Gerhardt, W. Ebstein, Ewald, Benda, P. Ehrlich, Grawitz, v. Leube, Senator, Litten and v. Jaksch—truly a brilliant galaxy. These books should be on the shelves of every progressive physician who cannot avail himself of the German original. The reader will extract much amusement from the article on blood examination by Lazarus. The editor of the second volume, R. C. Cabot, is himself an authority in this field and has frequently interpolated in brackets his own views, often diametrically opposed to those of the essayist. The result is sometimes rather ludicrous.

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THE CLINICAL STUDY OF BLOOD PRESSURE. A GUIDE TO THE USE OF THE SPHYGMOMANOMETER. By Theodore C. Janeway, M. D. New York and London: D. Appleton & Company.

A knowledge of blood pressure in various diseases seems now to be of the greatest importance. Inasmuch as the procedure is a comparatively new one to the clinician, and depends upon careful technique, such a work as this was greatly needed.

It is divided into three parts, viz., the physiological, technical and clinical.

A careful perusal of the volume will enable one to conduct the work with entire satisfaction. The various sphygmomanometers are described and criticised, and the technique of their application minutely detailed.

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PROPHYLAXIS AND TREATMENT OF INTERNAL DISEASES. By Frederick Forchheimer, M. D., Professor of Theory and Practice of Medicine and Clinical Medicine, Medical College of Ohio, University of Cincinnati, Cincinnati, Ohio. Cloth. Price \$5.00 net. D. Appleton & Co., Publishers. New York.

This is an eminently practical work, one which concerns itself diligently with the business in hand. It first lays down broad principles, then details the special applications of them, where possible; feeling that, it indicates the proper direction for their application.

It is essentially a work of breadth. It is also essentially a work of experience. Free from dogmatism, there is the calm assurance of one to whom the path is familiar. In these days of therapeutic pessimism, it is refreshing to find a practical physician to whom the making of a correct diagnosis is but the beginning rather than the end of his craft.

Dr. Forchheimer undertook a difficult task, but he has given us a most excellent work,—one that should have a large sale to the general practitioner—a book which has long been in demand.

**ECZEMA. A CONSIDERATION OF ITS COURSE, DIAGNOSIS AND TREATMENT.**  
By Samuel Horton Brown, M. D. Assistant Dermatologist, Philadelphia Hospital, etc., etc. Philadelphia. P. Blakiston's Son & Co. 1906. \$1.00.

The common knowledge regarding eczema is presented in this little volume in a form which renders the study of the disease more convenient than is usually done by the larger textbooks. The fact that all statements are made by the author in a dogmatic and positive manner will be appreciated by the practitioner who consults these pages and he will find explicit directions for the care of his cases.

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#### NEW PUBLICATIONS ANNOUNCED.

Messrs. W. B. Saunders Company announce for publication in the early fall the following excellent and practical works:

Keen's Surgery: Its Principles and Practice (Volume I).

Sobotta and McMurrich's Human Anatomy (Volume III).

Webster's Text-Book of Gynecology.

Hill's Histology and Organography.

McConnell's Pathology.

Morrow's Immediate Care of the Injured.

Stevenson's Photocopy (Retinoscopy and Skiascopy).

Preiswerk and Warren's Atlas of Dentistry.

Goepf's State Board Questions and Answers.

Lusk's Elements of Nutrition.

The most notable announcement is the new work on Surgery, edited by Dr. W. W. Keen, complete in five octavo volumes, and containing over 1,500 original illustrations. The entire work is written by the leaders of modern surgery—men whose names are inseparably associated with the subjects upon which they have written.

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**POKER JIM, GENTLEMAN.** by Dr. G. Frank Lydston, is announced for early appearance. (The Monarch Book Company, Chicago).

This is a story of the old time Californian mining camps by a native son of the Golden West. It depicts the oddities and heroism of the early western pioneers and brings out in bold relief the many-sidedness of their characters. The delineation of these characters is a labor of love on the part of the author, who recalls them from his boyhood's days, and as the most picturesque features of his early life.



# County Societies in Affiliation with the State Medical Association

County.	President	Address of President.	Secretary	Address of Secy.
Adair	James Hanks	Brashear	E. C. Grim	Kirksville
Andrew	D. B. Bryant	Savannah	C. O. Jeffries	Savannah
Atchison	W. G. Stafford	Tarkio	A. McMichael	Rockport
Audrain	C. A. Rothwell	Mexico	E. S. Cave	Mexico
Barry	Wm. M. West	Monett	D. L. Mitchell	Cassville
Barton	G. D. Allee	Lamar	J. L. McComb	Lamar
Bates	J. R. Coulson	Spruce	E. N. Chastain	Rich Hill
Benton	G. S. Greeson	Lincoln	S. O. Davis	Warsaw
Boone	I. E. Thornton	Columbia	W. A. Norris	Columbia
Buchanan	P. I. Leonard	St. Joseph	Chas. W. Fassett	St. Joseph
Butler	J. J. Norwine	Poplar Bluff	Ira W. Seybold	Poplar Bluff
Caldwell	R. K. Dodge	Palo	Tinsley Brown	Hamilton
Callaway	I. F. Harrison	Fulton	Martin Yates	Fulton
Camden	G. M. Moore	Linn Creek	G. T. Myers	Marks Creek
Cape Girardeau	H. L. Cunningham	Cape Girardeau	I. D. Porterfield, Jr.	Cape Girardeau
Carroll	W. C. Baird	Bogard	F. Cook	Carrollton
Carter-Shannon	F. Hyde	Eminence	J. A. Chilton	Van Buren
Cass	G. W. Farrow	East Lynne	W. F. Chaffin	Ravmore
Cedar	Kimball Hill	El Dorado Springs	J. W. Dawson	El Dorado Springs
Chariton	J. R. Gaines	Mussel Fork	C. A. Jennings	Salisbury
Clark	H. W. Harris	Winchester	C. C. Bridges	Kahoka
Clay	L. I. Jones	Linden	F. H. Matthews	Liberty
Clinton	John Sturgis	Perrin	E. A. Colley	Plattsburg
Cole	G. Etmueller	Jefferson City	A. W. McAlester	Jefferson City
Cooper	O. W. Cochran	Gooch Mill	J. R. Lionberger	Boonville
Crawford	W. A. Metcalf	Steelville	A. H. Horn	Steelville
Daviess	W. L. Brosius	Gallatin	M. A. Smith	Gallatin
Dent	A. F. McMurtrey	Salem	J. C. Welch	Salem
Dunklin	N. F. Kelley	Kennett	G. L. Johnson	Kennett
Franklin	H. A. Booh	Pacific	A. C. Brown	Moselle
Gasconade-Marie				
Osage	J. J. Ferrell	Owensville	I. W. Nieweg	Lois
Gentry	G. W. Whiteley	Albany	J. N. Conrad	Albany
Greene	G. W. Barnes	Springfield	Robt. M. Cowan	Springfield
Grundy	N. E. Sutton	Trenton	W. H. Winningham	Trenton
Harrison	A. H. Vandivert	Bethany	W. H. Wiley	Ridgeway
Henry	W. H. Benway	Deepwater	F. M. Douglass	Clinton
Holt	C. L. Evans	Oregon	J. F. Chandler	Forest City
Howard	V. O. Bonham	New Franklin	C. W. Watts	Fayette
Howell	A. H. Thompson	Lanton	A. H. Thornburgh	West Plains
Iron	R. W. Gay	Ironton	Ira A. Marshall	Ironton
Jackson	Robt. T. Sloan	Kansas City	Max Goldman	Kansas City
Jasper	J. D. Pifer	Joplin	R. M. James	Joplin
Jefferson	J. W. Pickel	Crystal City	C. G. Harris	Festus
Johnson	W. H. Farrar	Warrensburg	E. H. Gilbert	Warrensburg
Knox	L. S. Brown	Edina	Henry J. Jurgen	Edina
Laclede	J. C. Jacobs	Conway	P. L. Pritchett	Lebanon
Lafayette	P. S. Fulkerson	Lexington	C. T. Ryland	Lexington
Lawrence	J. A. Harris	Mt. Vernon	C. A. Moore	Aurora
Lincoln	S. R. McKay	Troy	Wm. P. Smith	Troy
Linn	J. W. Mason	Brookfield	Foster Burke	Laclede
Livingston	L. E. Tracy	Chillicothe	J. F. Cherrington	Chillicothe
McDonald	E. F. Doty	Anderson	M. L. Sellers	Anderson
Macon	W. H. Miller	Macon	C. W. Reagan	Macon
Madison	C. A. Anthony	Fredericktown	S. C. Slaughter	Fredericktown
Marion	Richard Schmidt	Hannibal	H. L. Banks	Hannibal
Mercer	H. P. Chesmore	Princeton	C. R. Buren	Princeton
Miller	S. P. Hickman	Ulm	J. L. Gilleland	Olean
Mississippi	G. R. Wallace	Bertrand	R. K. Ogilvie	Charleston
Moniteau	J. M. Robertson	Latham	W. R. Patterson	Tipton
Monroe	S. M. Brown	Monroe City	M. C. McMurry	Paris
Morgan	W. L. Hatler	Barnett	J. T. Beale	Versailles
New Madrid	Welton O'Bannon	New Madrid	C. W. Watson	New Madrid
Newton	R. L. Willis	Neosho	Horace Bowers	Neosho
Nodaway	F. R. Anthony	Maryville	H. L. Saylor	Elmo
Pemiscot	J. G. Luten	Caruthersville	John Johnson	Hayti
Perry	T. M. Hudson	Perryville	F. M. Vessells	Perryville
Pettis	W. C. Overstreet	Sedalia	W. J. Ferguson	Sedalia
Phelps	W. H. Bruer	St. James	S. L. Baysinger	Rolla
Pike	M. O. Biggs	Bowling Green	T. Guy Hetherlin	Louisiana
Platte	C. H. Chastain	Weston	G. C. Coffey	Platte City
Pulaski	W. L. Ragan	Richland	G. W. Orrick	Crocker
Putnam	C. H. Carryer	Hartford	A. Townsend	Unionville
Ralls	W. S. Harwood	Rensselaer	T. J. Downing	New London
Randolph	G. O. Cuppage	Moberly	W. M. Dickerson	Renick
Ray	D. Greene	Richmond	E. F. Higdon	Richmond
Reynolds	J. M. Lowrey	Centerville	T. W. Chilton	Corridon
Ripley	S. A. Proctor	Doniphan	J. F. Redwine	Doniphan
Saline	D. C. Gore	Marshall	B. F. Bell	Marshall
St. Charles	J. R. Mudd	St. Charles	D. K. Stumberg	St. Charles
St. Clair	W. Cline	Appleton City	D. B. Williams	Osceola
St. Francois	J. L. Haw	Farmington	A. L. Evans	Bonne Terre
St. Genevieve	C. Moore	St. Marys	R. W. Lanning	St. Genevieve
St. Louis	Geo. Homan	Odd Fellows Building	Hart Godloe	Vanol Building
St. Louis Co.	Howard Carter	Webster Groves	R. D. Moore	Central
Schuyler	J. T. Jones	Queen City	H. E. Gerwig	Downing
Scotland	A. L. Davis	Arbela	O. F. Pile	Memphis
Scott	T. F. Frazier	Commerce	C. P. Haw	Benton
Shelby	L. W. Dallis	Hunnell	A. M. Wood	Lentner
Stoddard	D. R. Corbin	Bloomfield	John Ashley	Bloomfield
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## ORIGINAL ARTICLES

### PYURIA\*

BY ERNEST G. MARK, M. D., KANSAS CITY, MO.

In presenting this subject for the consideration of this association it is, perhaps, best at the outset to remark that by the term "pyuria," the writer has reference only to the chronic form arising from suppurative processes in the urogenital tract in which pus in the urine is the most persistent and tangible symptom. The accurate localization of the origin of this pyuria is absolutely essential for its elimination and it is in the hope of presenting the methods for differential diagnosis concisely and clearly that this subject has been chosen.

Pus in the urine may originate in (1) the anterior urethra, (2) the posterior urethra, (3) the prostatic follicles, (4) the seminal vesicles, (5) the bladder, (6) the right ureter, (7) the left ureter, (8) the right kidney or its pelvis, (9) the left kidney or its pelvis and (10) from suppurating areas in the neighborhood of and communicating with any part of the urogenital tract.

Various procedures have been made use of for the purpose of determining definitely the origin of a pyuria. It is unfortunate that the majority of the methods in general use are fallacious and it will be the endeavor of the writer to point out these fallacies and the means by which they may be corrected.

Preliminary to absolute localization, it is necessary to determine whether the suppurating focus is located in the urethra, the bladder or the upper urinary tract. The two-glass test of Thompson, and the three-glass test of Jadassohn, in connection with microscopical urinalysis, have been largely depended upon for this differentiation and while they possess undoubted value, are subject to error.

Briefly stated, in the Thompson test, the first glass is supposed to contain the products of suppuration from the entire urethra and the second such products as are mixed with the bladder urine or squeezed from the prostatic follicles. In the Jadassohn test, the first glass is presumed to contain the products of suppuration from the entire ure-

\*Read at the annual meeting, Jefferson City, May, 1906.

the material squeezed from the prostatic follicles. Should the first thra, the second, the products from the posterior urethra and the third, glass be cloudy, the second fairly clear except for a few shreds, and the third more turbid, it is presumptive evidence of a posterior follicular involvement. Should the first glass contain shreds in a clear urine and the latter glass or glasses, no shreds, the indication is that the anterior urethra alone is involved. Should all three glasses be turbid in about the same degree, the presumption is that we have to deal with a suppuration which is back of the urethra.

These tests are not accurate for the following reasons:

(1) Should there be profuse suppuration in the anterior urethra, the products of suppuration will not be all contained in the first glass.

(2) The suppurative process may be confined to the posterior urethra and yet be so slight as to exhibit shreds only in the first glass.

These sources of error may be readily obviated by thorough irrigation of the anterior urethra previous to urination, the washing being kept for examination. These washings will contain what suppurative products are in the anterior urethra. What shreds or pathological material are passed at the subsequent urination must come from back of the compressor.

The questions which then arise are whether we have to deal with a posterior urethritis, a follicular prostatitis, a seminal vesiculitis, a cystitis or a suppurating focus located further up in the urinary tract.

If the urine passed in two glasses subsequent to irrigation of the anterior urethra exhibits shreds in the first glass and none or relatively few in the second, it is practically certain that we are dealing with a posterior urethritis. If both urines are cloudy in about the same degree or the second slightly more turbid than the first, the probabilities are that there is a follicular prostatitis present, possibly a cystitis, ureteritis or a pyelitis. Microscopical urinalysis is absolutely imperative and in the hands of a skilled pathologist will prove extremely valuable in identifying the different epithelia, etc.

If we have reached the definite conclusion that the suppurating focus is in the posterior urethra, we must determine the integrity or involvement of the prostatic follicles and the seminal vesicles. This investigation is best carried on as follows:

After urination the bladder is comfortably filled with a warm normal salt solution by the Janet method and the prostate carefully massaged, care being taken that the massaging finger does not extend beyond the limits of the prostate. The bladder is then emptied into a clean glass and the fluid saved for examination.

The bladder is again refilled with warm normal salt solution and the contents of one vesicle expressed, after which the patient empties the bladder, the fluid being kept for examination. The same course of procedure is pursued in regard to the other vesicle.



The fluids are then centrifuged and the microscope completes the differentiation.

Where we are called upon to differentiate between a cystitis and a suppuration higher up in the urinary tract, the following procedure commends itself as being easily applicable and fairly accurate.

The bladder is thoroughly irrigated through a soft rubber catheter until the washings are returned clear. The catheter is left in situ and the accumulating urine allowed to drain through it and collected. If it is cloudy and contains pus and epithelia in about the same proportion as the bladder urine passed before irrigation, the evidence is presumptive that we are dealing with a descending infection. The possible sources of error are obvious and may be avoided by cystoscopy and careful microscopical urinalysis.

If, as a result of these investigations, it is evident that the pus originates in that part of the urinary tract above the bladder, the questions as to whether the infection is unilateral or bilateral or is renal or ureteral remain to be settled. For this purpose, accurate segregation of the two urines is essential. The various segregators are, at the best, but makeshifts. They are inexact and are productive of much discomfort when in place, especially in the male bladder.

The catheterizing cystoscope affords us our only exact method of segregation and should be utilized where an accurate division of the two urines is essential. It requires no remarkable degree of skill for its employment and under proper precautions in technique is absolutely accurate and devoid of danger.

After the catheters are inserted into the ureters they are pushed up to the kidney pelves and the cystoscope withdrawn leaving the catheters in situ. After the first drachm or two of urine has escaped, the drainage is caught in two sterile bottles labeled "Right" and "Left," extreme care being taken that the catheter from the right ureter drains into the corresponding bottle and that from the left into its bottle. If no pus is found in these urines, the catheters are gently pulled down until they are just within the ureters and the drainage again caught in marked, sterile bottles, thus differentiating a pyuria originating in the kidneys or their pelves from one which is ureteral. The latter differentiation is seldom called for but completes the last link in the chain.

By the procedure outlined in this short paper, an accurate localization of the origin of a pyuria can be assured. That such localization is essential for successful curative measures, there can be no question. A pyuria accompanied by a dysuria must not be carelessly assigned to a posterior urethritis or a cystitis. Neither may be present and the kidney condition responsible for the symptoms, overlooked in a none too painstaking diagnosis, may pursue its course unchecked. An undiscovered vesiculitis, draining its infection into the posterior urethra

and by this drainage, making intractable the accompanying posterior urethritis, may prove the despair of the careless diagnostician.

Such conditions arising frequently in the every day practice of medicine seem to justify the purpose of this paper, to urge the application of methods of precision to the localization of a pyuria.

#### DISCUSSION.

Dr. J. D. Griffith, Kansas City: The Doctor has covered the subject so thoroughly in his paper that there is no room to discuss it. He made it clear that at least none of these pains can be readily established.

Dr. Herman E. Pearse, Kansas City: When the condition described by Dr. Mark exists, I would like to put myself on record as being in favor of examination by the renal character. I know there is some danger in this class of work. Some weeks ago I was doing some abdominal work and put a catheter up the ureter for a guide. The patient had bloody urine for about twenty-four hours due to the introduction of the catheter. I did not injure the bladder nor cause other injury. Any thing that can cause blood to enter the bladder is of some danger. Still, whenever it is necessary to clear up a question of the kind referred to and careful measures are taken against infection the danger should be slight. Catheterization of the ureter I have done a great many times. So far as I know I have never had any accident, other than the discharge of blood for a few hours mentioned above.

Dr. Mark, in closing: The only thing that I would add is in regard to the danger of infection in ureter catheterism. I would state specifically that where proper precautions and technic are employed the procedure is very free from danger. It is the consensus of opinion of those who have had large experience that the operation is practically devoid of danger from infection. I have done it hundreds of times and have never seen any infection, or trauma of appreciable degree. The procedure holds a definite place in the field of urology.

## THE USE AND ABUSE OF THE OBSTETRICAL FORCEP.\*

BY A. L. GRAY, M. D., ST. JOSEPH, MO.

Few instruments found in the physician's armamentarium are more extensively and universally used than the obstetrical forcep. Extensively so, because of the frequency of the occasion and universally so because, it is an instrument used by the general practitioner as well as the obstetrician.

The one fundamental principle in the use of this instrument is a proper understanding of the contour of the birth canal and at the same time the exact location occupied by the presenting parts. This is known as an axis traction principle, and notwithstanding it has been emphatically taught by modern teachers and extensively written upon by such men as Tarnier, Lusk and Simpson, yet its value is frequently over-looked by the general practitioner in the application of the instrument in every day practice.

The classification as to the forcep operations, is the High, the Medium and the Low operation, depending upon the location. The High when the presenting part is engaging at the brim. The Medium at the center of the true pelvis, and the Low when the presenting part is pressing upon the perineum. This is not an accurate classification and no one can state that in a given case traction must or must not be made in a given direction, as each modification of this classification calls for traction in a certain direction.

The whole principle lies in this statement that traction must be made in a line following the exact axis of the true pelvis. If traction is properly made, equal resistance will be met anteriorly and posteriorly. In making traction conform to this principle, less compression is required upon the child, and less damage and risk to the maternal soft parts. Less tractile force is required, therefore less *necessary* compression; less bruising of the soft parts and besides, spontaneous rotation is favored. Therefore a proper understanding of the location of the child and the shape of birth canal will enable us to make a more speedy delivery in the high and medium operation by using an axis traction device, with less risk to both mother and child. However without a proper understanding of shape and contour of canal the instrument may become a dangerous one. The traction rods must be kept parallel to the handle, if not, the blades may be drawn aside and plough deep into soft parts, doing irreparable damage.

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Of course, great and lasting credit is due to Tarnier, and while the principle evolved in his instrument is correct yet I believe that the mechanism of the instrument is faulty. It is somewhat complicated and weighty, and has a tendency to fall apart while handling. Besides, for the general practitioner it is quite expensive. There are many modifications but without referring to each individually, I believe that J. Y. Simpson's presents the simplest and best type. It is 14 inches long, moderate pelvic curve, and rather small blades, English lock, with traction rods lying in apposition to blades when in use.

This instrument certainly substitutes mechanism for judgment, experience and dexterity, besides being a labor saving device.

No force is lost, and a person of average strength is able to perform a forcep delivery without being tempted to resort to an irregular and sudden display of force involving injury to the patient, and exhaustion to the physician. It has been but few years since our authors and teachers taught us that the high forcep operation was not a justifiable one. Since the discovery of the axis traction device it is conceded to be indicated and justifiable. The damage formerly done in the using of the straight forcep was due to the force being directed against the symphysis pubis, while the axis traction device allows the force to be directed backward and downward, following Carus's curve, allowing internal rotation and less risk to child and mother than podalic version.

The three mechanical principles involved in the use of forceps are traction, compression and leverage. The one to be desired of course, is traction, made in the proper direction. Now traction may be steady, rocking, or rotary. Ordinarily steady traction is preferable and will accomplish all that is desired but there are locations in which I am of the opinion that a slight pendulum motion is justifiable, and will accomplish much. It is not justifiable when the point of the blades is above the brim, owing to the great risk to maternal soft parts, neither is it justifiable when the perineum is tense, owing to the extreme tear which may result; but between these points, when the head is on one side of the blade, and the bony wall on the other, much time can be saved by using a slight rocking motion, as it will have the same effect as pulling a nail from a board, a cork from a bottle, or a tight fitting ring from a finger. The rotary motion is not justifiable, owing to the damage to parturient canal, and has no advantage over the rocking traction.

2nd: Compression is not a principle to be desired, and is only necessary and co-incidental with traction. A compression in one direction makes the diameter of the head in the opposite direction correspondingly greater, therefore no advantage results, besides the great risk of damaging the cerebrum of the child, hence only such

compression should be used as will enable you to make the necessary traction required.

3rd: Leverage is not to be considered in the use of the axis traction forceps but was much used in the employment of the straight forceps in the high operation, while the symphysis pubis acted as a fulcrum. There is another force sometimes referred to as dynamic in nature. It is the mere presence of forceps in the parturient canal stimulating contraction. In my opinion as we will see later, in considering the indications for the use of forceps, the pains are tardy because of exhaustion and are not stimulated by the use of a foreign body introduced into the uterine canal.

We will now consider the indications and contra-indications for the use of the obstetrical forceps. Ist: The indications are many. In a general way, it may be said that inability on the part of the mother to deliver herself, causing exhaustion is one of the principle indications. 2nd: When rapidity is required in the interest of mother or child. 3rd: Inertia or deficient uterine contraction. 4th: Slight disproportion between the size of head and parturient canal. 5th: Unfavorable presentation or position. As to the first I am of the opinion that exhaustion is the most frequent indication, and good judgment is often required to determine whether she will, or will not, be able to deliver herself.

If we observe that the uterine contractions are becoming more feeble, that the pulse is more rapid with a corresponding decrease of tension, that the head does not press forward and recede with each succeeding pain, that there is a tendency to increase of pallor, a diminution of vaginal secretion and general symptoms of fatigue and inability to muscular exertion, then we have an accumulation of forerunning exhaustive symptoms, which call for the use of the obstetrical forcep, and at this point by way of parenthesis I desire to say that no obstetrician can say how long a woman should be in hard labor before the forcep is indicated. It is positively not a matter of time, but one of conditions. A woman who is strong and vigorous with good circulatory tension and a well balanced nervous system may withstand a hard labor for 6, 10, 12 hours, without showing signs of exhaustion, while another less vigorous, may show exhaustive symptoms in a few hours, so let your judgment rest upon the conditions rather than the length of the labor.

2nd: When haste is required; as in eclampsia or in placenta previa when engagement has taken place or when sudden death of the mother has occurred, and the child is to be saved, or in concealed hemorrhage, rupture of the uterus, strangulated hernia, or dangerous symptoms of the foetus such as violent motion, rapidity of foetal heart sounds, passage of meconium, etc.

3rd: Deficient uterine contraction. There are times when by a

rest under narcotics or anaesthesia, or stimulations by means of quinine, massage, etc., we are unable to produce sufficient contraction for the delivery of the child, and nothing remains but instrumental delivery. Again forceps are indicated in a breech presentation in the delivery of an after-coming head, provided such delivery is attended with difficulty.

Now there are certain contra-indications to the use of forceps. They should not be applied to the hydrocephalic head, nor the decomposed head, for they will certainly fail to hold, and, even if they do, the end gained is not equal to the risk to the mother. They should not be applied to the perforated head, as it can better be handled with a cephalotribe.

Forceps should not be applied if the os is not dilated to  $\frac{3}{4}$  of its full size and not then if the os is undilatable. The forceps should not be applied when there is a mechanical obstruction such as fibroids or carcinoma, for the friability of the cervix in these cases will greatly endanger the patient. Forceps should not be applied to the foetal head when the conjugate diameter is below three inches.

Again the forceps should not be applied until the amniotic sack is ruptured, and last, but not least, the forceps should not be applied until the head has engaged at the brim.

Had I not witnessed time and again the manner in which this instrument is mis-applied and used, I would feel it a duty to ask your forgiveness for presenting the technique of this operation, therefore hoping I may assist some one to become more skillful, I will present the *modus operandi* of this obstetrical manipulation. The patient, the instrument, and the physician should be prepared. The hair should be clipped from the labia majora and from the mons veneris, if long. The external genitalia, lower abdomen, inner thighs, and perineo-rectal region should be scrubbed with green soap followed by bi-chloride 1 to 4,000, and this, by sterile water.

The bladder should be catheterized. The forceps should be boiled in bi-carbonate of soda solution for 10 minutes and dipped in lysol solution as a lubricant.

The physician should cleanse his hands as carefully as in a laparotomy. The patient should be placed across the bed or, if a long and difficult case is anticipated, a table is preferable. Experience has taught me that these extreme precautions are necessary and I can truthfully say that in the delivery of 1,100 children in a period of 15 years, with 81 forcep deliveries, I have not had a case of infection, either sapremic or septicemic in character. During 400 births previous to 1891, I had 4 deaths, and I am confident now that none of these should have died had the germ theory been promulgated sooner.

Your patient should be anaesthetized. I prefer chloroform if delivery is likely to be affected in a short time, and ether if longer.



One assistant should hold each limb, and I should prefer to have the feet some six or eight inches higher than the bed or buttocks. Now is the time for you to introduce finger or hand, if necessary, and make an exact diagnosis as to the location of the fontanelles, and the direction of the sagittal suture. When possible or practical, apply the forceps on the opposite side from sagittal suture. It may not be practical in the high application, and in this case they can be applied to the sides of the pelvis and as soon as the head has reached the center of the pelvis, remove and re-apply to sides of head as you will less likely do damage to the child.

2nd: Do not make haste or become flustered, as you are doing a simple mechanical act, and a proper diagnosis of position and presentation will enable you to apply the forceps without difficulty. First take the lower blade in left hand and hold the instrument at right angle to your forearm. Introduce your right set of fingers within the cervix. Not one finger, nor two fingers, but as many fingers as your forcep blade is wide, and guide the blade to the side of the head. If it is in the high operation, it may be necessary to introduce the whole hand as a guide. By pressing the handle downward and toward the center, it will readily slip around the head. Make a similar manipulation with the upper blade. If properly applied they will readily lock. This application must always be made in the intermission of a pain. Tentative traction should be made to determine if the forceps will hold.

As to the use and application of the forcep in breech presentation, it is usually unnecessary. By the time dilatation of the cervix is complete, the breech is sufficiently low to hook the fingers in the thigh, and make enough traction for delivery. However, in a comparatively small pelvis with both feet up, the blades may be applied to the greater trochanter and a reasonable degree of force used without risk to the child.

Now as to the abuses of this valuable instrument. There may be a number of abuses to which the obstetrical forcep is subjected and for many reasons. Partly I may say from inability to properly diagnose the existing condition and partly from greed on the part of the physician. At times the physician will attempt to use the instrument where positively contra-indicated. For instance an application on a hydrocephalic head will result in slipping and perhaps cause great injury to the maternal structures. Again a man who is unable to properly estimate the size of pelvis may attempt to drag a normal child through a pelvis less than three inches, thus subjecting the mother to great traumatism and destroying child by using extreme traction and compression. 3rd: It is an abuse of the instrument and in opposition to its purpose to attempt to use it as a dilator as the fingers are more effectual and there is less danger of

severe tear and damage to uterus. 4th: We abuse the very intent of this instrument when we use more compression than the given amount of traction required and in this manner destroy the child or inflict permanent cerebral injury. 5th: The unskilled application by those who have had much experience is an abuse which we cannot pass lightly by. Physicians in haste or in ignorance of a proper understanding of the shape of the birth canal and the contour of head make grave errors in their adjustment. They attempt to place the wrong blade first, they do not use the hand to guide, they frequently use too much force in its introduction and are not careful to adjust lock, therefore do not apply to opposite sides of head. 6th: It is abusing a good article when we apply a straight pair of forceps in the high operation without having attached to said forceps some form of axis traction device.

7th: And now from an ethical standpoint, one of the greatest abuses of this instrument is its unnecessary use. We have the life and health of two individuals in our hands and yet for our mere convenience we are sometimes tempted to use them when unnecessary. We do so for the purpose of saving time or ending a tiresome and tedious wait.

The conscientious physician should not assume such a responsibility.

8th: And again from a pecuniary standpoint the instrument is used and abused and many a mother is subjected to a forcep delivery for the purpose of increasing the fee. This procedure smacks of graft and greed for notoriety and gain and should meet with the condemnation of all ethical and honest practitioners.

Remember brother, that your duty as an obstetrician is somewhat a sacred one and that you should no more allow yourself to apply forceps except as indicated, than the surgeon should operate upon a normal appendix for the sake of a fee. Let your indications be clear cut and do not subject your patients to the unnecessary risk unless the condition requires it.

#### DISCUSSION.

Dr. W. S. Allee, Olean.—I have always considered the forceps comparatively harmless in the hands of competent men, but the obstetric forceps in the hands of a fool is a most dangerous instrument. It seems to me the doctor lays more stress upon the preparation of the patient than is practicable in country practice. The patient should be clean and I believe in washing the patient, but I think shaving is an extreme measure. I seldom resort to an anesthetic. I have often applied the forceps with the patient unaware when that part of the operation was completed. Unless there is some reason for the use of an anesthetic other than the application of forceps, I believe it

is ill advised. I always listen to the suggestions of a perfectly normal patient, for naturally the patient will suffer pain if the forceps are not properly applied. In the case of a primipara, where great suffering has already been borne and the patient is in no condition to longer endure it, an anesthetic must be used.

Dr. W. E. McKinley, Denver:—The forceps are all right in many cases, but it is an instrument greatly abused by the general practitioner of medicine. Many practitioners use the forceps at times when it is really not indicated, or become impatient to visit another patient and use the forceps in order to get through more quickly, many times at the expense of the patient's strength. We should be careful to have the patient clean and the instrument thoroughly sterilized. With an anesthetic we would not be so likely to produce injury to the birth canal as without it. Without it the perineum will not yield so readily and we would necessarily be more harsh or rough in our manipulations.

Dr. Jos. M. Hale, Dearborn:—I consider this paper a very strong espousal of the forceps delivery. There are times when the forceps are indispensable. There are times when the forceps are absolutely necessary, but if we had the opportunity to examine our patient previous to confinement and could know the conditions of the pelvis, then, being called when labor sets in and knowing the size of the head as well as possible, we would be masters of the situation. Whenever it becomes necessary to resort to a high forceps delivery we should throw away the forceps and use podalic version. Version is always, preferable to forceps unless you are too late to ascertain the existing conditions.

Dr. A. H. Vandivert, Bethany:—As to the technique, there are some things I can see no objection to although not always practical to carry out fully as described by Dr. Gray. But we can never be too particular when we have the opportunity. As to high delivery, I am satisfied that there have been many mistakes made in attempting to apply the forceps before the head was engaged. To lay aside the forceps and do podalic version as suggested will often relieve embarrassment, and you can deliver much more promptly and with less danger to mother and child. My experience has been that it is better to use an anesthetic. You do not know when the patient may change the position of the body and result in injury that may be embarrassing to you. When the anesthesia is profound enough for the patient to lie quietly you can do the work much more easily. It has been my experience that when a woman has been delivered with forceps once she will insist on the use of the forceps the next time because she was relieved of pain earlier and you may be overpersuaded to use them earlier than is necessary. You must always bear in mind the condition of your patient.



Dr. L. T. Dunaway, Caplinger's Mills:—An honest confession is good for the soul. Before apply the forceps I do not make much preparation for I have not found it necessary beyond seeing that my hands, the forceps and the bed are clean. One point in the paper was overlooked, namely, the removal of the forceps before complete delivery.

Dr. C. T. Ryland, Lexington:—The best thing in the paper was the description of the *modus operandi*. The most surprising thing I have met with is the ignorance displayed by the general practitioner in applying the forceps. I once saw a man try to apply them with the forceps locked. As for cleanliness, some men will take them out of their dirty old grips and apply them without so much as wiping them off.

Dr. M. S. McGuire, Arrowrock:—Recently my assistant was a nurse from a hospital. When the patient had been in labor forty-five minutes the nurse got restless and asked me if it wasn't time to deliver that head. Of course it wasn't and I informed her that she was the last one to get uneasy. A half hour later she asked the same question again. I found before I got through with the case that she had been associated at the hospital with physicians who consummated delivery without waiting, as they were anxious to get through with as little delay as possible.

While one of the gentlemen has spoken of the fact that the country physician is not entirely acquainted with the technique of the application of the forceps, I want to say that I have had a very thorough demonstration of the fact that our brethren in the cities often use the forceps too early. In using the forceps in the country I have had to use them at times when I had no help at all except some neighbor woman. But you cannot be too cleanly, even if you are at work in a log cabin. You should be just as aseptic as under any other conditions. I differ with Dr. Allee and say that we should consider all cleanliness as essential.

Dr. Allee:—I did not say it was unnecessary to be clean, but that it was not necessary to shave the patient.

Dr. McGuire:—If we omit some parts of a cleanly preparation we are likely to omit some essential parts. I thought Dr. Allee's remarks too slack for imitation. I do not think we can be too cleanly, even to the shaving of the parts, and it saves annoyance in applying the forceps. Some anesthetic should always be used. I do not think it is possible for a man to apply the instrument without a great deal of pain to the patient unless a sufficient anesthetic has been administered to render the patient unconscious of the pain. I have found a lacerated perineum where there had been no attempt at repair and the patient did not even know that she was in such a condition.

Dr. Gray, in closing:—I believe it is as necessary to be aseptic

in the application of the forceps as in doing a laparotomy. You will never have a case of septicemia if you are absolutely clean. But one condition can exist where the woman can infect herself and that is a pus tube before pregnancy. If the woman otherwise becomes infected and has fever it is because of the physician or the nurse. Before the examination we should cleanse the patient and our own hands perfectly. I cleanse my hands with a scrub-brush and soap, have the patient bathed and the long hairs clipped by the nurse, and I make as few examinations as possible. As to taking off the forceps before the child is born, I believe the physician can usually have better control of the head of the child by leaving the forceps on. If the perineum becomes very tense you can control the on-coming head better with the forceps than otherwise.

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### THE GASTRIC NEUROSES.\*

BY VICTOR A. BLES, M. D., ST. LOUIS.

Those ancients who placed the location of the human soul in the human stomach were not quite so bizarre in their assertions as might seem to the average unmedical mind. *Mens sana in corpore sano* has always held good and, as the stomach plays the all-important part in the conversion of our food into substances which form the proper materials for the repair of tissue waste, the stomach's share of the task of keeping the equilibrium between body and mind undisturbed is proportionately heavy.

Although functional gastric disorders are common enough, they are generally secondary to, or concomitant with, other morbid states and those gastric diseases which are primary and are purely neuroses, being of neurologic as well as gastricologic interest, are rare.

The definition of course is simple. Stress must be laid upon the neurotic or functional feature and the absence of anatomical lesions which could account for the oftentimes grave conditions met with. Naturally enough genuine anatomical lesions may result from continued functional disorders but are then only secondary.

When we look into the etiology of gastric neuroses we find it difficult to separate cause and effect and to decide which is the first link in the vicious *cable sans fin* formed by central and peripheral neuroses.

And before touching upon the subject of gastric neuroses I would say a few words on the subject of neurasthenia in general. There are those who would minimize the importance of this condition. Some ridicule the thought that neurasthenia should be considered a separate morbid state and class its manifestations as the outcroppings of a simple nervousness. To me neurasthenia is a true disease, even if its symptoms be so obscure as to be often misinterpreted, its pathology

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\*Read before the St. Louis Medical Society, meeting of March 31, 1906.

practically unknown, its duration so great as to cover a life time. Great is, to my thinking, the responsibility of him who, in the midst of the universal rush for money, fame, knowledge or power, takes just enough time to marry and beget children with the chance of burdening them with the burden of neurasthenia. And deliberate race-suicide is not always selfish but may be in reality altruistic. The choice of a wife undoubtedly is a strong factor in the propagation of the modern curse, nervousness. Only too many of those, whose nervous economies are but too easily affected by every wind that blows, choose for life-partners the ones who are "congenial," which means that they are as neurasthenic as themselves. It is plain, therefore, that heredity is a factor in the causation of gastric, as well as general neuroses, and will be a stronger one as civilization advances and we drift further and further from the simplicity of our forefathers. It is all the plainer to me as I watch apparently big and robust men and women show neurasthenic manifestations such as one would expect from a chlorotic girl at puberty. Furthermore the number of psychoses of all kinds is steadily increasing and especially of those which evidently require a certain inherent and inherited predisposition towards nervous degeneration as well as a specific base.

The greater number of sufferers from gastric neuroses are women before the menopause, the young adult women, as might be expected from the fact that they form a large majority of those who suffer from functional disturbances generally. Hard and fast rules cannot be laid down. Although often we can recognize the type of the true "dyspeptic," yet at other times we find the sufferers from extreme gastric disorders of functional nature remarkably well-preserved. This lack of consistency holds good when the predisposing factors are taken into consideration. For, although those of a higher order of civilization, those subjected to severe mental strain or those upon whose shoulders rest a host of social duties, are more apt to find the nervous mechanisms of their gastric functions impaired than those of lower degree, yet we find many cases among working people, even in those whose labors bring them constantly outdoors, such as farmers, soldiers and even sailors. Sexual excess is a prominent predisposing cause in both sexes.

In making complete examination of the patient's condition we are aided by other neuroses of various kinds, indicating general neurasthenia or the possession of that unenviable attribute, a nervous temperament. Headaches, vertigo, mental depression, insomnia, neuralgiae in various forms may in turn mask or be masked by the gastric symptoms and it can readily be seen that it is not always an easy task for the specialist to determine if the general neurasthenia or the gastric neurosis be the primary state, which is an exceedingly important matter when it comes to the treatment of these conditions.



Then there is the group of cases which are purely hysterical, without a sign of organic lesion, purely mental.

At this junction let me say that there is a vast difference between true neurasthenia and true hysteria. Only a few weeks ago one of the members of this Society, a specialist of no mean ability, referred to neurasthenia as "innate cussedness," evidently having hysteria in mind. Neurasthenia is an impoverishment of the nervous system just as anemia is an impoverishment of the circulatory system, while hysteria is purely mental.

Gastric neuroses may be due to irritation of brain and spinal cord, of testicles, kidney, liver, or again to pressure upon some plexus of nerves, connected with gastric functions, as in lordosis or scoliosis. There may be a direct interference with central gastric innervation such as takes place in the medulla in cases of tabes dorsalis, giving rise to the well known gastric crises.

Eye-strain has been called a cause but is probably more a concomitant manifestation of the general neurasthenic condition. Such irritation may come from actual myelitis or again from so-called hysterical spine. The genito-urinary apparatus may be at fault, causing a toxæmia which weakens the nervous system and is exhibited through the gastric functions. Toxæmiae of all kinds, from the sensation of fulness after a hearty meal, calling for a demi-tasse or a thimbleful of liqueur—and which is really a mild form of tonic poisoning—to the grave conditions arising from chronic constipation, or from fermentation of the stomach contents with formation of noxious gases, all may serve as causes to weaken the motor or digestive mechanisms of the stomach and to be made effects in their turn.

Alcohol, tobacco, coffee in excess, all sorts of states, conditions and diatheses, gouty, tubercular, malarial, and, not the least of all, syphilitic, all may play their parts in creating conditions which publish themselves through means of the much abused and long-suffering stomach.

And, although such gastric neuroses, being temperamental, are, *e rerum natura*, mostly chronic, yet, if due to extraneous, removable causes, they may be but temporary, such as those arising from genito-urinary disorders, from curable psychoses, from hysteria or from pregnancy. Or again they may be quite fugacious as are those due to the cerebral anemia of seasickness or the cerebral congestion of sun-stroke.

The literature on the subject is extensive and I will not burden your patient ears with a recital of the names of men who have distinguished themselves in the realm of stomach work. It will be sufficient to state that a remarkably long time ago, as early as 1790, and even earlier medical men had a clear conception of gastric neuroses as primary disorders (Comparetti), while since then contributions have

been made by men of all nationalities, French, English, German and Italian.

It is essential to an intelligent dissertation on the subject of gastric neuroses to briefly review the nerve supply of the stomach.

The principal nerves are the two vagi which, below the neck, travel along the oesophagus, the left or smaller one on the anterior aspect, the right or larger one posteriorly. It must be remembered that, long before they reach the stomach and ramify into their final divisions, in fact as soon as they reach the oesophagus, they give off a large number of filaments which form a delicate plexus in the substance of the oesophagus and so reach the stomach, so that for experimental purposes not only must the two vagi be cut in order to sever the connection with the central nervous system, but a circular incision must be made through the muscular coat of the oesophagus.

The left nerve passes to the cardia and lesser curvature, forming the anterior gastric plexus, two-thirds of the right vagus passing on to the abdominal viscera, the other third forming the posterior gastric plexus. The terminal filaments of both pneumogastrics anastomose extensively with the sympathetic system.

The sympathetic system plays its part in the control of the stomach through the celiac plexus, the *cerebrum abdominale* of the ancients, which gives rise to a number of secondary plexuses, such as the coronary and hepatic which supply the lesser, and the inferior coronary which innervates the greater curvature of the stomach. All these plexuses, as said before, are intimately connected with the terminals of the vagi, thus explaining many reflex phenomena. Intestinal plexuses also find their origin in the nerve supply of the stomach which accounts for the almost universal concomitance of intestinal with the gastric symptoms.

We are told that experiments with the nerves controlling the stomach have failed to show that they directly affect the secretion, although the severing of the vagi generally causes cessation of the flow of gastric juice.

We know that the activity of the gastric glands cannot be only due to the entrance of food or saliva into the stomach for, in a case described by Richet and in which the oesophagus was totally occluded, preventing the possibility of food thus reaching the gastric mucous membrane, a fistula had been established for the observation of the gastric secretion. The mere chewing of substances of a decided character, sugar or lemon, produced a copious secretion of gastric juice. Which shows that the stimulus was a reflex one although produced directly through nerves of special sense without intervention of psychical processes. It is clear that in a case where the sight of appetizing substances produces a flow of saliva or gastric juice, the process is

different for there is first created a mental impression which in turn causes the secretion.

These mental processes may act as inhibitory influences to the general *tone* of the gastro-intestinal tract. We all know the influence of fear upon the gastro-intestinal as well as genito-urinary tract. We all know how fear or sudden excitement will cause the food to "stick in one's throat," how anger will cause food to "lie like lead on one's stomach" and even to be vomited in undigested condition. But the severing of the external nerve supply does not always stop gastric activity so that it is probable that there exist within the stomach walls ganglionic centres which act upon the glands along sensory paths. This activity, however, in such cases only follows direct mechanical stimulation.

Where a condition presents so many phases a description can be much simplified by a classification either according to its etiologic or to its symptomatic features, but in gastric neuroses the causes are so many and the symptoms so varied that a classification combining both methods, such as adopted by Ewald seems best. He, then, recognizes conditions due to irritation, to depression of the gastric innervation and those due to both. Again, since the nerve-supply of the stomach controls its motor power, its sensation and its secretion, we have as many more subdivisions.

Among the sensory neuroses due to irritation we find hyperaesthesia which, if strong enough, gives rise to what is sometimes classed as a separate condition: nausea. This hyperesthesia may be mild as in the case of a young child vomiting its food without probably any more serious cause than having played too hard, or it may be strong as in hysterical vomiting or in the neuroses caused by extraneous organic disease, e. g., cerebellar tumor.

We will pass over the well known fact that stomachs have their individual idiosyncrasies. What medical student has not marvelled at the fact that one grain of quinin could cause a patient to be covered with a scarlet fever rash? Who of us has not seen the urticaria which follows in certain individuals the eating of strawberries or lobster?

We will also mention but briefly the variations of hunger due to irritation of the hunger centres. These are loss of hunger or anorexia and excessive hunger or hyperorexia. It must be remembered that the sensation of hunger, although varying with the condition of the stomach, does not arise there but in the hunger center in the medulla and is caused by the ebbing of metabolism.

In speaking of anorexia as a neurosis we do not include the loss of appetite incidental upon some organic stomach condition, but that loss due to hyperesthesia of the stomach or to irritation of the central nervous system. There may be a genuine repugnance toward food so that at last the patient may starve himself, or may eat a few bites and



then find it impossible to eat more. Other cases refuse to eat because they do not feel the need of eating. It is needless to state that many of these cases are hysterical.

A more interesting idiosyncrasy is that of hyperorexia or *Bulimia*, ox hunger, also called cynorexia or *fames canina*, dog hunger. This condition is either primary and connected with gastric hyperaesthesia of nervous origin, or secondary to other gastric conditions, such as hypersecretion, or to diseases of disturbed metabolism, such as diabetes or Addison's disease. Examination of stomach-contents shows that in some of these cases the stomach is emptied in an incredibly short space of time, while in others the time of food-passage may be normal or even retarded. We find this condition, moreover, during convalescence from acute diseases, after operations (gastroenterostomy), in connection with uterine disorders, and Pavy has observed it in a condition of a peripheral irritation due to worms. This condition may be exceedingly annoying to the patient as the craving for food may come at any time. It may be temporarily satisfied by the ingestion of any trifling amount of food, showing that the sensation is central in origin, and it often comes with a stomach full of food, which distinguishes this condition from polyphagia, in which the craving only comes after the digestion of the food previously swallowed, while in akoria there is a lack of the feeling of satiation and the patient might go on eating forever. The condition finally becomes exceedingly weakening.

That the many gastralgiae may be of very varied origin goes without saying. The causes may be local or central. The pain generally is quite severe but not always localized, often diffuse. The duration is from a few moments to several hours. Generally speaking the attacks are self-limited and are followed by exhaustion, while their neurotic character is shown in their being eminently independent of the taking in of food. True gastralgiae or gastric neuralgiae without any sign of anatomic lesions are rare. When they exist, they may be secondary to a condition of hypersecretion which irritates the terminal filaments of the vagus nerve. Gastralgia is often hysterical and, as we only have subjective symptoms to judge from, the diagnosis from a true gastric neuralgia is often quite difficult. In such cases a study of the patient's behavior, a careful search for other hysterical acts or manifestations, the possible presence of morbid mental states with the usual cravings for sympathy and attention, are most helpful in the rendering of a decision.

Neurasthenic gastralgia is, as the term implies, due to true atony of the central nervous system, a weakness which manifests itself by alternate conditions of irritability and depression. In the first we find migraines, painful points and electric irritability, the pain being severe and more circumscribed. In the depressive form the symptoms

are much vaguer, the pain diffused and the mental state one of exhaustion as is often shown by profound sexual weakness. In my own practice I found one case, however, in which sexual excesses had produced decided gastric irritability and hyperaesthesia. In this case there were severe gastralgic pains, vertigo and vomiting. During the attacks the patient's expression was anxious, there was evidently a sense of impending calamity, the pulse being rapid. These attacks ceased suddenly and the patient ate well and went back to work, thus presenting almost a typical picture of tabetic crisis, which was excluded by a careful examination of the central nervous system. There was no history of dietetic error and one would have looked for profound depression rather than irritability.

This leads me to refer briefly to the subject of gastric crises, much of our knowledge of which we owe to Charcot. A gastralgia apparently unconnected with organic disease of the stomach always calls for a careful examination of the central nervous system. As these crises may make their appearance early in the history of the case, frequent errors in diagnosis are unavoidable and many cases of repeated supposedly ordinary colicky attacks have finally died the death of the tabetic. A search of a few minutes' duration may give us the presence of Westphal's or Romberg's symptom, a pupillary inequality in size or action, or of pharyngeal anaesthesia. The cause, as remarked before, is irritation of the vagus at its commencement in the medulla. The pain is fulminating, running up from the groins to the epigastrium, or in the shoulders, radiating downward. There may be vomiting, severe, continuous, uncontrollable, of mucus, blood or bile. The pulse is generally hastened. There may be headaches and vertigo. Then the picture changes with almost uncanny suddenness. The patient, so recently sick unto death, is a well man and demands food. The examination of the stomach generally gives negative results. These crises have also occurred in multiple sclerosis, myelitis and ophthalmic goitre.

There are two conditions of nervous irritation which affect the secretory functions of the stomach: hyperacidity and hypersecretion.

The first is naturally relative. Just as there is no definite standard for the force of the normal kneejerk, so we cannot draw a distinct line and say where hyperacidity begins as normal acidity varies with each individual.

Hyperacidity has been noticed in the hysterical, the melancholic, the neurasthenic; also in connection with biliary and renal calculi. It is principally to be distinguished from the hyperacidity accompanying gastric ulcer.

Hypersecretion or gastrosuccorrhoea is a totally different condition. The acidity may be increased absolutely but not comparatively. The increased flow may be started by the ingestion of food or it may

occur continuously, while the stomach is full or during a fast. It has been observed to the amount of two pints and the fluid is to all intents and purposes gastric juice without any remnants of food, but sometimes containing bile.

The pathology of this condition is rather obscure. Some claim that it is simply a prolongation of the normal reaction to the food stimulus. Others hold that it is absolutely uninfluenced by food. As might be surmised, the increase of gastric juice hastens the digestive process, at least of albuminoids, and increase the appetite. We do, however, find that this increased appetite and hearty eating, in conjunction with the underlying element of neurasthenia, is apt to bring about a condition of atony with, subsequently, a true organic degeneration of the muscular coat and finally gastrectasis.

We now come to a review of the neuroses of the stomach's motor mechanism. As none of these conditions rarely occur alone, but mostly in company with other neurotic motor manifestations of the gastrointestinal tract, it will be well to group them together.

Here, then, we have eructation or nervous belching, the annoying condition which excludes the unfortunate sufferer from social intercourse by force of its explosions. It must be but a sorry comfort for the sufferer to know that the escaping gas is odorless and tasteless, differing in this respect from that raised in true fermentative processes. Its presence probably arises from atmospheric air being swallowed and forced up again by increased contractility of the stomach, assisted possibly by pyloric rigidity alone, or combined with atonic relaxation of the cardia. In a few cases the belching was so rapid that the patient could not possibly have swallowed the air and there was considerable doubt as to the expulsion of any air at all. This belching may be purely hysterical and performed at will.

There exists also a nervous pyrosis or heartburn with the sensation of burning, produced by the regurgitation of stomach contents which, however, are perfectly normal.

We have also a neurotic tympanites or filling of the stomach with atmospheric air which is retained by spasm of the cardiac and pyloric sphincters. These distentions may push the diaphragm up, cause a dyspeptic asthma and are relieved only by an upward escape of the gas.

A condition of great interest is seen in that of nervous vomiting which is a reflex symptom of serious diseases of the central nervous system or other organs or may be reflex from obscure neurasthenic or hysterical conditions. It is generally unaccompanied by retching, may be periodical or come after ingestion of certain dishes. It may be reflex from gallstone or brain tumor. It is claimed by some to be frequent in neurasthenia, by others to be rare. Personally I have found it to be rare. I have also found that in neurotic persons attempts to produce vomiting artificially for the removal of undigested masses



meet with but indifferent success, the irritation of the fauces seeming to induce a decided spastic tightening of the cardiac sphincter.

Among organs which reflexly cause vomiting the principal one is the uterus in pregnancy which, by its steady enlargement, presses upon the sympathetic nerves. As soon as the pregnant womb has risen from the pelvis the pressure is released and the vomiting stops. Several cases of apparently pernicious vomiting of pregnancy have proved to be hysterical and ceased under stress of great emotion.

We close the series of irritative conditions of the gastric motor-mechanism with a brief reference to simple increase of motility and peristaltic action. We have an increased action of the muscular coat, so that the chyme passes into the intestines more rapidly than normally. There is generally a hyperchlorhydria present. Ewald claims that this increased action may be assisted by an atonic insufficiency of the pylorus, but, in view of the fact that the condition is one of irritation and pathologically increased muscular tone, I would rather believe that this precipitate propulsion of stomach contents took place in spite of a contracted pylorus, rather than with the assistance of an incompetent pylorus.

Now let us consider the conditions due to *depression* of the nerves in control of the stomach.

Just as we could draw a picture of bulimia, a condition of voracious appetite due to *irritation* of the hunger centers, so we have the companion portrait of increased appetite due to *depression*, akoria, a negative condition, a lack of the feeling of satiation. This affection is rare and to the discredit of mankind must it be said that many reported cases are simply those of remarkable gluttony.

Nervous anacidity or lack of  $\text{HCl}$  is, according to some writers, fairly frequent and is often found in hysterical subjects. I wish to enter a protest against the use of the word *anachlorhydria* to indicate a lack of  $\text{HCl}$ . This word does not reflect credit upon him who coined it. It should have been *achlorhydria* as the prefix *a*, the *alpha privans* of the greek grammars, indicates: a lack of. Only when a word begins with a vowel is an *n* added, as in anorexia, anæsthesia, anæmia. The prefix *ana*, however, signifies an onward or upward or constructive tendency, as in anacrotism, anabolism, so that anachlorhydria in reality would mean an increase of  $\text{HCl}$ . Who of us does not remember the days of our Greek studies when we read *Xenophontos Anabasis* or Onward march of the Ten Thousand?

A partial or total relaxation of the cardia gives rise to a condition of regurgitation in which small particles of partially digested food are brought back into the mouth, swallowed again or expelled. This leads us up to an exceedingly interesting, if rather disgusting condition, that of true rumination.

It must be remembered that many cases of so-called rumination

are in reality only those of regurgitation, in which the particles are, as remarked before, partly digested and possess the well known bitter taste which is not due to HCl but to the presence of peptones. Just as the introduction of bovine vaccine virus led to the superstitious fear (so eloquently portrayed by the great caricaturist Hogarth) that forthcoming generations might bear horns or have other cattle-like attributes or deformities, so the observation of the phenomenon of rumination led our progenitors to believe that something oxlike or goatlike in the parents caused children to be thus afflicted or made those progenitors cast an even more serious reflexion upon the morality of the parents. Such a reflexion is probably ungrounded for even in this twentieth century we see many members of the human family with a good deal of the ox and of the goat in them, which was undoubtedly handed down from father to son, without there being created any cases of rumination.

This phenomenon is thought to be made possible by a sacculated condition of the cardiac end of the oesophagus and a temporary paresis of the cardiac sphincter, while in some cases the stomach was also found to be much dilated. The underlying cause is probably central as the sufferers are frequently neurasthenic and hysterical. Example and especially heredity are strong factors in its causation. Great mental excitement and complete change in mode of living have been known to bring about a cessation of this neurosis. The particulars of this condition do not make up into a pleasing pen-picture so I will merely state that the pieces of food, on being brought up, are said to be remarkably unaltered in taste and often come up in a regular order, inversely to the order in which they were swallowed. In some the habit becomes so necessary to the patient's health that expectoration of the regurgitated masses led to great emaciation and the habit had to be continued. (Sauvage).

Ewald is very definite in classing muscular atony as a primary gastric neurosis, apart from atony of the secretory apparatus. When, however, it is remembered that gastric atony is a manifestation of true neurasthenia, it must for many of us be hard to believe that such a fine distinction could be made that the same neurasthenic stomach could digest food normally but fail to send it on its way. In fact I believe that the normal digestion of food and the presence of the acid chyme act as stimuli to normal peristalsis. Also it is well known that in cases of complete inhibition of the gastric functions, as by fear or anger, in subjects easily influenced by such emotions, not only does peristalsis cease but the food remains practically undigested.

Having before us now the consideration of neuroses due to conditions of irritation and depression in the same subject I believe we may pass rapidly over a condition, which some regard as a primary neurosis, in which a relaxation of the abdominal ligaments in general

causes a general sinking of these abdominal viscera, including a gastropptosis. The multiplicity, the variability in intensity and occurrence of those symptoms, combined with the fact that in some cases there may be no symptoms at all to indicate a gastropptosis, gives some idea of the difficulties connected with making a diagnosis of primary atony of the visceral ligaments. Patients have been operated on for suspected neoplasm when only a general sinking of the abdominal visceral was found. In one case the manipulation of the abdominal organs during the course of the exploration seemed to act as a massage or stimulus, so that in a few weeks the patient was discharged as cured, the viscera having resumed their normal functions (Poltowicz, Roux). *En passant* it may be interesting to state that tight lacing and the abdominal relaxation incidental upon the child-bearing period are important causative factors to this condition, accounting for the greater frequency of this condition in women.

The principal condition due to instability of the general nervous system, manifesting itself through symptoms arising from irritation and depression alternately, is nervous dyspepsia or neurasthenia gastrica, which naturally enough, considering the nature of the disease, includes many of the other gastric neuroses. Here more than anywhere in the domain of gastric disorders does the difficulty of separating cause and effect make itself felt. Of late much of the vagueness of knowledge which enveloped nervous dyspepsia with a mantle of obscurity has been cleared up and men like Jurgens have reported direct anatomical changes such as degeneration of certain plexuses and of the muscularis mucosae in what were considered cases of purely nervous dyspepsia (Sasaki, Blaschko) and especially in cases where the neurasthenic condition was caused or accompanied by anaemia.

Intestinal disturbances nearly always keep step with the gastric and the picture formed by constipation, alternating with diarrhoea, under stress of great emotion, by variable appetite which may be excessive and independent of the presence of food in the stomach, by the irregular gastric pains, generally not over-severe, and by the frequent and annoying accumulations of gases is well known to the general practitioner as well as to the internist.

The aetiology is varied as the name implies. In the majority of cases there are no anatomic lesions and the cause must be looked for in the many states and conditions which predispose to all neurotic manifestations. Business care, lack of exercise, sexual excesses, hysterical manifestations, may be the causes. This disturbance proves, more than any other, the necessity for making a careful diagnosis and for instituting a patient search for the least signs of organic disease. A thorough study of the patient's actual condition, not only, but of his temperament and habits, so as to prescribe the proper surroundings, occupation and diet, is absolutely indispensable.



Let us not linger on the subject of the many idiosyncrasies with which the neurasthenic stomach can surprise us. Enough be it to say that there may be a slight hyper- or subacidity, that vomiting is rare and often even difficult to produce artificially, so unlike the easily produced hysterical vomiting, and that the faeces may be normal, flattened or tubular. The ordinary symptoms of gastric disturbance often fail for the patient may be quite healthy-looking, the tongue is clean as the average healthy human's. At one time the patient may be transported with joy at the fact that he does not "feel his stomach," but soon he may be in the depths of despair at the thought that a terrible incubus of ill-health is to be his for the rest of his life. He may be as touchy to the changes of the weather as the oldest rheumatic and a bad cold may make him look as if he had been ill for weeks.

The prognosis is as uncertain as the cure of general neurasthenia itself would be. Years and generations of heredity may have to be fought tooth and nail, some habits may have to be formed, others overcome, conditions changed; so we must expect that, while in some cases we may succeed in making a new man of a patient, in others we find such a resistance to therapeutic efforts as to make the most valiant heart grow weary.

The treatment in general, then, must be tonic, quieting irritations, stimulating a state of depression often by suggestion, improving in the meantime the bodily health. And, although a thorough study of dietetics is necessary and of the greatest importance, yet I find that in true neurasthenia generally a wholesome, generous diet, omitting, of course, rich and irritating foods, often gives better results than a rigid, painstakingly selected diet.

Of the drugs only a few need be named: arsenous acid, nitroglycerin, caffeine or the phosphates of iron, quinin and strychnin. I have found long-continued exhibitions of quinin up to the point of cinchonism excellent in obscure conditions, in which there was reason to think that there was a malarial taint, even if the history of malaria was remote or doubtful.

Bromides of sodium or strontium, the phosphide of zinc, salol, beta-naphthol, massages, lavage and intra-gastric as well as the Scotch douches externally, electricity to a small extent. Iron in anaemia, especially when given as an albuminate. A host of purgatives and cathartics must be constantly borne in mind.

Following the doctrines of Tolstoy, who regards modern advancement and civilization as direct attempts to evade the primary curse: In the sweat of thy brow, etc., which we know was not a curse but a wise and humane law, and who holds that a return to actual manual labor will solve the problems of the world, I am a strong believer in outdoor work for those who are not used to it. Horseback riding, golf, sea-voyages, camping out and especially walking, all are great helps in the

work of restoration. The mental influence, obtained by a change of surroundings, combined with the medicinal benefit derived from life at some mineral springs, is well known.

In conclusion I would say that too much cannot be said about the care with which opium and its derivatives should be given to neurasthenic patients, useful as these drugs undoubtedly are to subdue hyperæsthesia of the gastrointestinal tract. Given a neurasthenic subject, a human being full of idiosyncrasies, habits and notions, generally abnormally sensitive to the action of most drugs, is it not plain that only too easily the servant might turn upon us and become master, and clutch our patients in a grasp from which no human power can free them? Even as I have avoided the recital of cases from my practice, so will I refrain from laying down rules for treatment and from the naming of medicines or therapeutic agents to meet particular conditions. Here more than anywhere else does the individuality of man rise up to confront us so that each of us must needs work out his own salvation, using the best of what medical and general education, knowledge of life and of human nature have placed at his disposal.

I, for one, feel deeply how far down we must look for the underlying cause, how strongly the undercurrent works against our pigmy efforts and how the application of therapeutics can only affect the surface as does the surface of water respond to the imprint of a pebble which the fierce undertow may sweep away out of our ken.

The final cure of neurasthenia must lie in prevention and ours is the duty to inject the prophylactic antitoxins of education, advice, and comfort where we can, carrying, as it were, stone by stone, brick by brick, a handful of plaster here and a pinch of cement there, the material which is to go into the glorious structure of a regenerated humanity.

I do not go beside the subject of gastric neuroses when I declare that our great struggle must be directed against the complexity and artificiality of modern life, for the nervous system has to pay the piper and the patient stomach is generally made to bear the brunt of the burden, as is a certain domestic animal, until patience is strained to the utmost and the time has arrived to object, which the stomach then does, frequently, strongly and with effect.

The world cannot grow better until we have taught men and women how to marry, and parents how to bring up children in the spirit of self-control, simplicity of body and mind and of unselfishness. The great church universal cannot be all-encompassing until men and women have learned that it is better to lay up the treasure of a sound mind and body than to hand down to their offspring the heritage of wealth and degeneration. The great brotherhood of man cannot come into its own until, by at least a partial or periodic return to the simplicity of the prototype, the brain is cleared of the toxemias

which suffocate it by their noxious vapors and which irritate and depress the human mind to the level of that of foul animals. Unfortunately rare, but rarely fortunate is he who, by force of will and by aid of circumstance, can cling to the rock of simplicity, *saevis tranquillus in undis*, calm though surrounded by raging waters.

What I have said may be old and hackneyed to those who have gone deeply into this subject of gastric neuroses. The race of general practitioners who class all gastric disorders of more or less obscure nature as "indigestion" is fast becoming extinct. Even they, who do not delve as deeply into these matters as we who devote special attention to this subject, recognize the necessity for the most careful diagnostic methods, physical and chemical, and that neuroses of the stomach occupy an important place in the phalanx of nervous manifestations.

#### DISCUSSION.

Dr. Charles Shattinger: It is no small merit of the doctor's paper that it suggests so many trains of thought in connection with the stomach, anatomical, pathological and clinical. Thus in outlining the nervous supply of the stomach he called attention to the secretion being produced in the stomach with complete occlusion of the oesophagus and with the exclusion of any psychic stimulants. That is corroborative of the fact that the secretion of the stomach is excited by the movements of mastication independently of ensalivation. Hence we may say there are three ways of producing gastric secretion, psychic, masticatory and organic. I thought I heard the doctor say there was no direct nervous supply in the stomach by way of acting upon its secretion. I am under the impression that the secretory function is under the direct control of the vagus and sympathetic, the first psychic and the second organic, independent of the mind or any outside influence. One condition that has interested me particularly because of the extreme difficulty of handling it, is that of nervous eructation, a state in which you can find nothing that can explain to you how this is brought about, and I was very thankful to obtain a clue at one time which experience has corroborated, i. e., that these people often are partly responsible for the eructations by the efforts they make to belch. They feel a fullness and they try to relieve this by abdominal pressure. In doing this they press upon the stomach and empty it partially, force the air out, and with the following relaxation of the stomach walls, air is sucked into the stomach. Now, if these patients are intelligent, and you call their attention to this fault, it will very effectually help. Of all the methods I have tried, but one has seemed to be of any particular use, and that is abdominal massage. As to the treatment of these conditions in a general way, great stress should be laid on the point, that, with a few exceptions, such as abdominal massage, lavage (not for cleansing the stomach, but for the effect it has on the nerves of the stomach) and gal-



vanism, the treatment should always be general and not local. The doctor as well as the patient must have attention drawn away from the stomach and directed to the condition of the patient as a whole. In the matter of exercise, for instance, it will never be sufficient to tell that patient to walk. There should always be some mental stimulus coupled with these proceedings to derive good from them.

Dr. Grindon: Dr. Bles' reference to the fact that rumination was at one time supposed to be significant of the horned ancestry of the sufferer, reminds me that Fabricius of Aquapendente in the 16th century wrote an article on the subject. He refers to one patient from whom he learned that his father had a horny growth upon his forehead and says it was thus given us to know that there was a bovine tendency in the family.

Dr. Robert Barclay:—I believe the author gives the dimensions of the growth. He saw the growth which he describes. He adds, that he saw also another case.

Dr. Bles, in closing:—I am a strong believer in neurasthenia and in heredity, but I cannot believe that people are born with a hereditary tendency to gastric neuroses in particular. The build and general condition may account for much and education, training and surroundings do a great deal.

Recent investigators differ as to the nerve supply. Some writers claim that section of the vagus inhibits the secretions of the stomach, others, that it does not. As to eructation, there are cases where the muscular movement becomes a habit; the patients do not always swallow the air. Abdominal massage acts by increasing the peristalsis of the stomach and intestines, thus increasing the tone of the visceral organs. Many of us fly to the stomach tube for assistance, but in neurasthenic patients there is great danger of producing gastrectasis. The stomach is liable to be atonic and unless you remove all of the fluid you will have a bad result. As for Dr. Grindon's interesting historical reference, I think we may cast a little doubt on the observations of those people. Cases in later years, thought to be those of rumination, were in reality nothing but eructation.

CRIMINAL ABORTION: A PREVAILING EVIL AGAINST  
THE UNBORN GENERATION: A NATIONAL CRIME  
COMMITTED FOR MERE SOCIAL PROMOTION.\*

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BY T. F. LOCKWOOD, M. D., BUTLER, MO.

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The title with which I have announced my text, is one which bears with it such weight, such dimensions and such magnitude of human depravity, as to almost cause thinking men to become awe stricken in studying this the greatest evil found in the annals of human events. No act of a human race, either white or black, should be more profoundly denounced and universally condemned by the citizens of the world, than the one herein referred to. War with all its bloody conflicts creates no greater terror among the living, and inflicts no greater pain upon the dying, than the cruel hand of sinful man inflicts upon the helpless, irresponsible unborn creatures of our own flesh and blood, imprisoned in the mother's womb that subsequently becomes its premature tomb. A human being, immature as it may be, irresponsible for its creation as it is, placed in favorable conditions for development and future existence, now becomes a menace to progressive society, and is trodden beneath the heel of pride like a worm of the dust. Here the body of a heartless aristocratic woman ceases to be the earthly tabernacle for her own soul, but has been converted by love of society into a slaughter-house for her own dependent young. If these tortured beings had the power to cry out in agonizing response to the murderous assault waged upon them, what a pitiful lamentation, what a doleful sound would emanate from the dying multitude of these little human beings to greet the ears of murderous mothers and criminal doctors who are accessories to the crime. Both doctor and mother are equally guilty, both are criminals in the eyes of the law, and from a moral standpoint, a more dastardly deed could not be committed by a civilized people than this inhuman act of blighting and hindering the perpetuity of our species.

If mothers had full control of conception and gestation, it would be but the expiration of the present generation until the final extinction would come. The civilized portion of the globe would be depopulated by the follies of a people who would willingly sacrifice an entire nation merely for present social enjoyment and selfish motives. The woman that abhors the idea of becoming a mother is to be censured and not

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\*Read at the annual meeting, Jefferson City, May, 1906.

pitied, though poor fool as she is. Never to feel and to know the tender touch of a baby's finger; never to press a sweet curly-haired head to her breast; never to watch with ardent love, the gradual unfolding of this beautiful flower called a child; never to know the profound joy abiding in motherhood, is never to know and realize the supreme function of her being. She passes through life with her chief mission on earth unfulfilled. She becomes a monstrosity as it were, in womanly traits and makes neither a perfect wife nor an aimiable companion. If she refrains from bearing children by lawful husband, she will also shirk the common duties belonging to a true and devoted wife in the home. The tenderest memories of life are those which cluster around the name of mother. No more bitter sorrow can come to a normal woman then to be denied the boon of motherhood. Such women carry to their graves longing hearts for the great joy which has been denied them. Such unfortunate creatures as these, are to be pitied indeed. But how different with the generality of healthy women. I have seen married society ladies upon finding themselves pregnant, break down and weep as though they had committed an unpardonable sin and many have become desperate, threatening to end their own lives, and nay, I am sorry to say, some have purposely carried out their threats, while others have done so accidentally in attempting to bring on an abortion. Was it to evade the pangs of childbirth that prompted them to contemplate such an act? Was it thoughts of having to care for the infant after birth that caused this rash deed? Or was it due to common excuses, poverty and physical inability to undergo the ordeal of child-bearing and child rearing? To all this I will venture the assertion, the mind was negative and did not hold the least of them as the prime factor in forming a basis for excuse for desiring to overthrow nature, but it was due to false modesty; it was the thought of being handicapped for a few months during pregnancy; it was hindrance to social pursuits; it was the thought of having to abandon many worldly pleasures for the care of her babe, that caused her to take it so seriously to heart. And in order to escape the dark, imaginary picture of motherhood, they take the life of their helpless child at the extreme risk of losing their own. Strange it is to my mind to observe the feeling the mother holds for her child before and after birth. Before birth, it is a matter of absolute indifference and she becomes incurious of its existence. But after birth, when she has heard its audible cry and has clasped its tender form to her bosom, then the Omnipotent hand only can tear it from her breast.

If human life is appreciable, if it is but worth the living at all then every child born into this fastidious age, should receive its own applause at least, to know that it has run the gauntlet of human society and is now ready for enlistment in the army of contemporaries which has successfully passed through the same defiles of perverted nature.



Every babe born should be a blossom of joy with the fragrance of happiness to the heart and home of every American citizen. It should be the chief blessing from the great Giver of all good gifts in reciprocation of the fulfillment of his divine plan of creation; but instead of all this the little ones ushered into the aristocratic homes of today, are thorns and thistles that prick the souls of society's sons and daughters who feel humiliated to bow at the command of the King of the universe in recognition of his law of creation. The majority of children can no longer thank the Creator for their existence, but should thank providence that they were the happy outcome of a grievous mistake made in matters pertaining to preventive measures.

Since the advent of so many preventive means, the birth rate has grown markedly small, so small that the President has become alarmed at the situation when he speaks of "race suicide" and talks of means by which to suppress the manufacturing of such apparatus as are now being used by thousands of women to prevent conception. If women must and will persistently refute nature's efforts at reproduction, then it is far less criminal to use a harmless preventive than to resort to mechanical and criminal measures to bring about a premature expulsion of the embryo or fetus. In this instance no life is intentionally taken; no death of the mother subsequently follows, consequently the pitiless woman has less sin to account for at the day of judgment than if she had willfully taken the life of her helpless progeny as it lay incarcerated as it were, in the prison-house of her own womb.

A very disgusting state of affair exists in the prominent fact that poodle dogs and purring cats have robbed the child of its rightful place in the hearts of many society women. An ugly, pug-nosed cur has lavished upon it the affection that was intended, and should be given, an unborn generation. There are owners of flats in cities who refuse to rent to tenants with children but will welcome the poodle dog and tabby cat. What an extreme perversion of love and sympathy with the mothers of our nation, when a poodle or a pug, may occupy the place in the heart and in the home, the heritable rights of children of the land. The talking parrot has been adopted in many childless homes as a substitute to satisfy that feminine longing for something on which to lavish love. They will not allow it to be a child, so it must be a poodle, pug, pussy or a parrot.

The large cities, where pomp and power hold easy sway, where aristocracy reaches the pinnacle of fashion, may boast of their rapid increase of population, but did you ever stop to consider from whence this increase came. Not from wealth and pelf of the higher masses; not from the fuss and bluster of gay society; not from those who daily seek the parks, theatres, ball-rooms and pleasure resorts for life's artificial happiness. No. This mundane class have no time to give to rearing children; they look at child-bearing with an eye of reproof

and with an air of disgust. This increasing population comes from a well recognized source, from the humble working classes who have not shirked the duties we all owe to mankind, to our country and to our God. The poor are prone to follow the teachings of the Good Book in multiplying and replenishing the earth, not from choice alone perhaps, but from the want of means by which to purchase luxurious sin. The wealthy buy immunity at any cost, the poor must abide by the ultimate consequences of their poverty. The well-to-do shun the family ordinance of multiplying the race which necessarily shifts the task, if it be a task, to the less financially favored, who must bear the burden of his arrogant brother in perpetuating the human family. There is one great consolation that should fill the hearts of the humble poor beyond the bounds of ordinary measure, with love and admiration for their prolific families, and that is to know that in them and their progeny lie the latent forces that will govern the nation years hence. To them and theirs, the world looks and relies upon for all the achievements necessary to perpetuate the grand purposes of mankind.

A bulletin issued by the Census bureau, 1904, prepared by Prof. Walter F. Wilcox, of Cornell University, shows a persistent decline of birth rate in the United States since 1860. Between 1850 and 1860, the proportion of children to women between 15 and 49 years, the child-bearing age, increased, but since 1860 it has decreased constantly. In 1860 the number of children under 5 years old to 1,000 women, 15 to 49 years of age, was 634; in 1900 it was only 474. The proportion of children to potential mothers in 1900 was only three-fourths as large as in 1860.

Considered sectionally it is found that in the North and West there has been a more or less regular decline, while in the South the change has been less regular and the decline less marked. In 1850 the proportion of children to 1,000 women in the North and West was five-sixths of what it was in the South; in 1900 it was less than three-fourths. In 1900 the smallest proportion of children was in the District of Columbia, where the number of children under 5 years was hardly more than one-fourth the number of women of child-bearing age. The next smallest proportion was in Massachusetts, where it was slightly more than one-third. The largest proportion was in North Dakota and Indian Territory, in each of which it was two-thirds. In 1900, for the United States as a whole, the proportion of children was only two-thirds as great in cities as in the country districts. In North Atlantic district, however, it was almost as great in the cities as in the country. In the Southern divisions it is hardly more than half as large in the cities as in the country, while in the Far West the difference is intermediate in amount. "This," it is explained, "is probably due in large measure to the fact that the immigrant population, which has

been swarming into the Northern cities of recent years, especially into the cities of the North Atlantic States, has been multiplying by numerous births with much rapidity, while the corresponding class, which has emigrated to Southern cities from surrounding country districts, has not been thus increasing."

A comparison is made between the proportion of children born of native mothers to 1,000 native women of child-bearing age and the proportion of children born to foreign-born mothers to 1,000 foreign-born women of child-bearing age. In 1900 the former proportion was 462, the latter 710, the difference indicating the greater fecundity of foreign-born women, so thought by Professor Wilcox. I cannot agree that this larger per cent. of children born to foreign mothers is due to the greater fecundity, for I truly believe it due to the fact that they are not experts at preventing conception and must allow nature to supervene.

Through the professional courtesy of Dr. J. L. Andrews, of Memphis, Tenn., I am permitted to use statistics and quotations from a very able article written and read by him before a medical society in the state of Tennessee, along this same line. I shall only endeavor to give statistics from research and those gathered by him personally from doctors in his vicinity. This report shows the present status of affairs in that locality, and what is true of Tennessee, is also true of other cities and other localities. This report comes from twenty-four men well representing the average practitioner of medicine. The report was also confined to the months of January, February and March, 1904. "These twenty-four physicians have reported 174 pregnancies, of which 105 went to term, and 69 aborted, or 60.34 per cent. went to term and 39.66 per cent. aborted. In 69 interruptions, eighteen, or 26.08 per cent., were admitted criminal, twelve, or 17.39 per cent., were suspected criminal, twenty-eight, or 33 per cent., were said to be accidental (and not criminal), three, or 4.30 per cent., cause not known to the reporter, five, or 7.24 per cent., cause not stated by reporter, two, or 2.89 per cent., were done legitimately in the interest of the mother, 6, or 8.98 per cent., were beyond four months. In eighteen admitted criminal abortions, 13, or 72.22 per cent., were produced by instruments; five, or 27.72 per cent., were produced by drugs. In three of the admitted criminal cases, the name of the abortionist was stated to the physician and in one case, the amount paid the abortionist as mentioned—ten dollars."

What think you gentlemen, of a physician who will sell his soul and furnish his patient with a passport to the warm regions besides, all for the pitiful sum of ten dollars! Talk about the profession of medicine drifting into commercialism and no longer maintaining the high rank in public estimation it once occupied! Is not such nefarious conduct as that sufficient to kill the morals and to lower the dignity of



this grand and stately profession that has been and is to-day, represented by some of the best men the world has ever produced? It is useless for me to eulogize the profession in its legitimate standing as you know its value, therefore I will allow you to draw the contrast between this and the commercial degradation of the profession as herein described.

The statistics above given were gathered by 24 physicians from three months' work, and in averaging up for the full year's labor of these 24 physicians, we find in total, 420 pregnancies and 276 abortions. In even numbers, giving the negative the benefit of fractions, we would have 17 pregnancies and 11 abortions to each physician for the whole year. In the state of Missouri there are about 6000 physicians and if each physician in the state should have his proportion of obstetrical work, there would be in aggregate numbers, 102,000 pregnancies and 66,000 abortions. This is a rough estimate of the number of abortions each year, for there are many miscarriages that do not come to the notice of a physician; but it is comparatively accurate and serves to show the great army of human beings sacrificed each year merely for social promotions and personal gratifications.

"So far as I know," quoting Dr. Andrews, "these figures represent the only statistics in medical literature, based upon cases in private practice, certainly in recent years. The results are most startling, and yet, I dare say, not surprising to the general practitioner in city life. It is appalling to think that of sixty-nine abortions, eighteen were admitted criminal, and twelve more were strongly suspected criminal; or in all, thirty cases, or nearly 50 per cent., were either admitted or suspected criminal. And of the remaining thirty-nine, in eight cases the cause was unknown to the reporter."

Chicago should not be classed with greater distinction than any other large city as the chief city of sin, for all that can be said of Chicago can well be applied to any city. "Dr. C. S. Bacon, of Chicago, after a careful consideration of the subject, says that from six to ten thousand abortions are induced every year in that city. Dr. R. W. Holmes, of Chicago, says that where one abortion occurs from the various pathological causes, many more are produced by the professional abortionist, instruments, drugs and other measures." This state of facts is indeed deplorable to the extreme and if this procedure continues with the same increasing rapidity in the future as in the past, it will not be long until Uncle Sam will have to offer large premiums for new born babies in order to keep up the nation.

The non-sterile woman who becomes the wife and queen of the household, does not perform her whole duty, does not discharge her sacred mission in full on earth does she not bear children, everything being equal. The good wives in the country, upon the farm, whose hearts pulsate strongly in unison with the throbbing impulses of lov-

ing nature, have no time to flit away at balls and theatres, and God blesses their prolific propensities in furnishing them with large and happy families to swell the population of this great nation.

A popular belief is current among society ladies, however, that the very ignorant and slothful have large families and to do likewise, would be to lower their dignity to an equal degree. Parents of many children, in some instances, are actually ridiculed and sometimes censured for their fructiferous inclination. But the day of penitence comes to all who so foolishly waste their reproductive age; but comes, alas, when it is mournfully too late. It comes when the power of reproduction has become exhausted after having spent its force in an untimely way. When the female is no longer thus capable of reproducing her kind, then it is she reaps the seeds of her folly and thinks evilly of the past days and conditions that led to her present predicament. If it were so that the fair sex retained her power of reproduction throughout her physical life, then she might, after reaching her stagnant stage in society circles, atone for the past by settling down to the duties of wife and mother, enjoying at least, a taste of the joys of motherhood, receiving a crown of honor along with her good sisters who have done likewise.

How unwisely live some wives of to-day. Free from the cares of children in early life, is to be free from their bestowed love in after years. When the hair silvers with the frost of many winters; when the once beautiful form has grown stooped and tottering under ages of accumulated burden, how sweet to the soul would be the sound of cheering voices coming from a group of happy children: To live and die alone in a childless home, is to shut out from the longing soul the advancing sunrays from a heaven of peace, and to die a death most pitiful indeed. No one can do more for poor old mother in sickness and distress, than the hands of loving children. Who can best smooth out the wrinkles from her dying pillow? A kind son or an affectionate daughter. No one at death can lay her away more tenderly than her own dear children.

The healthiest and happiest women to-day are mothers who have borne many children. Those of us who have mothers under 70 living, know that many of them are physically stronger than the average young society lady of to-day. Bearing children in a normal way, never shortened the life of any woman, but instead, added years to her longevity. The old negro mammies who have reached one hundred years or more, are mothers of large families. No, it favors longevity to bear children and I believe we are much to blame in not teaching them this important fact and firmly impressing upon them the necessity of this healthful feature of married life. If doctors would set out to establish a new system of living, discouraging and denouncing all tendencies toward refutation of race progress, flatly refusing to

advise in any manner at any price, except in a legitimate manner, I believe it would lend very materially toward checking this sinful practice of aborting and the too frequent crime of infanticide. So in the name of civilization, let us save this martyred nation by teaching women to love children; kindle and rekindle the spark of love of offspring that has ceased to burn in their hearts, that they may be made to realize that for the sake of God and man, they have a more noble function to perform in this earthly career than merely to live for self alone. Upon her devolves the great duty of national motherhood and to shirk and to shun this sublime duty is to violate the moral law and the law of God and His creation. Let every physician become a missionary of mercy in the field of his labor, teaching and exhorting the public against this national crime and ere long, I trust that the souls of husbands and wives will become inspired with that exalted principle necessary to perpetuate God's favored creatures from now to the end of the world.

#### DISCUSSION.

Dr. C. H. Chastain, Weston: This paper serves to impress upon our minds that a crime is being committed in our communities and those committing this crime are using their diplomas to shield themselves. One of the chief questions to be considered is, how are we to convince the mothers who are guilty that this is a crime? They do not look upon this as a crime and they apply to physicians for an abortion as freely as for a prescription. Until you can get the mothers to understand that they are committing a crime, and until the profession understands that it is a crime that will not go unpunished, it will continue.

Dr. W. S. Thompson, Armstrong: I endorse every word of Dr. Lockwood's paper. He has not exaggerated the enormity of the practice of abortion in the least. Everyone knows how hard it is to enforce the law against the professional abortionist, for it is difficult to secure evidence. The individual having an abortion produced is as guilty as the abortionist and the law is such that if she gives evidence against the abortionist she incriminates herself. Recognizing this the state board of health has instituted a crusade against abortionists. The board has no authority to proceed against individuals who have an abortion produced but it has authority to revoke the license of criminal abortionists; not having authority against the individuals, the board can promise immunity to these individuals if they will give evidence. Hence such individuals will be less reluctant to testify. The licenses of several abortionists have been revoked and I would like to see all reputable physicians come to the assistance of the board in this matter. Many women who have abortions produced know that after the abortion has occurred, if they send for the abortionist they will be suspected, hence they send for a reputable physi-



cian. If you will make some little effort to secure evidence that will lead to the revocation of the license of these abortionists some of them can be disposed of very easily. The law is strong enough to stop it, but it is very hard to convict individuals by legal process.

Dr. J. Pitman, Kirkwood: I agree with the essayist in most of his points. But we men are a peculiar portion of the human family. Since the days of Adam, we have imagined that we had a scapegoat for our misfortunes. I did not hear the essayist throw part of the blame where it belongs. Two criminal classes were mentioned, the mothers and the abortionists. All this blame should not be thrown on the mothers. Are we willing to throw all the blame on the women? The men are to blame as much as the women. There is no law under heaven that will control abortion. We cannot by legalized enactments control it. We must go down into our hearts and admit that we men are to blame. A mother surrounded by a large family of children, working twelve to sixteen hours a day, with a limited purse to supply the wants of her family, deserves sympathy as well as blame and I repeat that the men are as much to blame as the women. I stand here today to defend the women, not that they are guiltless, but that the men are equally guilty, and the women are not more to blame than their husbands. Not one abortion in a thousand is done without the consent and approbation of the husband. Let us blame him some and not throw it all on the women.

Dr. J. T. Anderson, Cornelia: Not all aristocratic homes are childless through preventive measures. A goodly portion of sterility is due to gonorrhoea contracted by the cultured young man. This has caused more pain and more ovariectomies than all other causes combined, and it is the cause of more abortions than any other cause, not excluding criminal abortion. Teach the young man that the world does not revolve around his sexual organs and there will be less need for such papers as this.

Dr. Joseph Grindon, St. Louis: We are all agreed as to the estimation in which we hold these miserable creatures masquerading under the name of physician and I don't believe it is necessary before this audience to engage in heaping maledictions upon heads already sunk so low. But I ask, what has been offered in the way of a remedy? We have heard something of what may be done in the way of legislation and of the difficulties to be encountered. It seems to me that there are certain remedies to be applied and it is the duty of every one of us to do his part. This question comes to all of us as physicians and as men. I hold that our highest honor in the term *doctor* consists in this, that a doctor is not only one who heals disease, but is a *teacher* as well, and that upon us lies the responsibility of teaching the community even more perhaps than upon those whose profession it is to teach morality. One thing we can do is to educate the women.

There is a widespread idea among them that there is no life in the ovum until after quickening. We should impress upon them that abortion intentionally produced is murder, no matter how early it is done. Murder is a very ugly word, but that is an additional reason why we should use that word and let them understand just what it means. Second, we may in some way shame the preachers into doing at least a part of their duty, which very few of them do. There is one church, the Catholic, among the members of which this crime in question is rarely committed. This is due to open instructions through sermons, instructions and parochial visits, without any mingling of words and to the confessional. I have heard more than one Protestant preacher of the gospel admit that he did not touch upon that subject because "it would not do." The third point is, who are we to get after? If there is anybody we should get after and shame, it should be the most powerful, those in the highest places. I believe those in the profession guilty of these things are already condemned, but there exist our great newspapers, such as the St. Louis Republic, the Globe-Democrat and the Post-Dispatch, that publish advertisements of abortionists male and female, and of various pills, medicines, "regulators," etc. No woman is so ignorant but knows what these advertisements are meant to convey. These things are done by papers, which pose as great educators of the public, for the sake of the miserable, dirty dollars they can rake up from the foul floor of the slaughter-house of the innocents.

Dr. W. R. Patterson, Tipton: I wish to compliment the gentlemen who have laid the burden of responsibility where it belongs. The extent of this practice cannot be calculated and the immoral influence is beyond reckoning. What are we, the members of the medical profession, going to do about it? We should today resolve that our influence as teachers shall go out against this crime and that our influence with the legislative bodies shall be for the enactment of laws that will have a tendency to check this crime. Much can be accomplished by the unanimous co-operation of the medical profession.

Dr. A. H. Vandivert, Bethany: The points are well taken but one point has been overlooked and that is the responsibility of the family to bring the young people to understand more of the laws of physiology so that when they go out from their homes they will go with a better understanding of these matters. In the family circle education in regard to these matters should commence. If the young people are given a high standard of moral responsibility before they find themselves in a position to assume such responsibilities, they will be less liable to commit such crimes.

Dr. A. L. Gray, St. Joseph: The responsibility has been thrown upon the man, the woman and the abortionist, but a good many of our every day practitioners are to a degree responsible. A woman comes

into our office and tells us that she has passed over a day or two and that she wants us to dilate the uterus and put in a little gauze, and a good many of our practitioners do this. Now, if it is only one day or two days these young practitioners should understand that it is a crime. A special oath should be required of the young man starting into practice that he will not commit this crime.

Dr. A. C. Reynolds, Martinsville: It has been assumed that the people in the rural districts are less frequently guilty of this crime and the greater part of the blame has been laid upon society women. I live in one of the rural districts and know several families who have been married six to ten years with but two or three children. The abortionists practice through the mails. In nearly every city in the United States there are houses advertising these things and by sending them through the mails they permeate every home in the rural districts. I know one woman in our country who can produce an abortion as well as any man in this house, she asks the help of no mortal man. She can do it herself. All she has to do is to send to a house in Chicago.

Dr. Lockwood, in closing: I feel very much complimented by the interest manifested in my paper and I assure you I have enjoyed the discussion with great satisfaction. This subject has stirred the minds and feelings of the profession and the laity as well, with compassion for the many helpless lives that constitute a surprising portion of an unborn generation.

Woman is superior to man in so many walks of life that we, as the opposite sex are not much inclined to attack her in matters pertaining to social and moral government, therefore we cast the first stone of accusation with some hesitancy and to do this, we must turn from the glare and glamour of gay society and face the imaginary bewailing cry of the death-tortured unborn babe who would have been born as you were born and would have lived as you have lived had not the tide of society swept away the barriers and fortifications of nature's wise plan of reproduction.

Imagine if you can an abortionist extracting from the womb an embryo, or foetus and as it lies quivering in his palm, with a fiendish laugh, presents it to the anxious gaze of the perverted mother for inspection and for absolute proof of his criminal work. How revolting is all this to contemplate, and yet it is being done every day right in our midst.

I could not close this discussion without a word of praise for the good mothers who have complied with all the natural functions and phases pertaining to perpetuity of mankind, and I would apologize to those so unfortunate, that from disease or other causes, are unable to fulfill the office of maternity; they are to be pitied and not censured. I have no reference to the true and noble mothers of our grand



nation whose lives are made the sweeter by having enjoyed the distinction of motherhood. It is the aristocratic class, whose homes are childless and as chill and cheerless as a country graveyard in mid-winter, that have furnished so much material for discussion here today.

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### THE BEST TIME TO GIVE QUININE.\*

BY R. L. JOHNSON, M. D., ROLLA, MO.

In selecting a subject for your consideration, I did not wish to take one that has been presented very often, nor did I wish to report some novel or unique case, which might never occur in ordinary practice. In looking over the papers that have been read before this society in the last few years, I do not find more than two or three that discuss malarial diseases and their treatment. Aitken says: "The more frequently a disease occurs, the more necessary it is that its phenomena should be carefully investigated." Certainly few diseases are more frequent than those that we comprehend under the general term of malarial, and no remedy more firmly established in their treatment than quinine and the other products of cinchona bark. It may seem therefore to demand an apology for attempting to awaken a discussion, or for saying anything on this subject. I find, however, from an intimate acquaintance with many physicians and quite extensive reading of recent publications, that there are still many, and perhaps most physicians who do not fully adopt the method which I propose to advocate.

The legitimate bases for a course of practice are experience, precedent and reason. I lay down a proposition that the best time to give quinine in malarial disease, is *immediately on the commencement of the sweating stage*, to promote its *immediate absorption* and its *prompt elimination*.

Of the three foundations for a practice, I name experience first. I will not dwell on my personal experience; everyone must gain his own. It will not be improper, however, to mention here, where I am a stranger to so many, that fifteen out of the forty-three years of my professional life, were spent in active practice in the Sea Island and rice country of South Carolina and in a Louisiana swamp, 70 miles wide, where I have repeatedly treated all the malarial diseases endemic in those localities, probably representing all the forms known in the United States.

When I began my career in that line of work, an economic question presented itself to me; one which regarded my time, my patient's time and suffering, and my pocket. Two methods of giving quinine offered themselves for adoption. The conservative method, then gen-

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\*Read at the annual meeting, Jefferson City, May, 1906.

crally recommended, to give it in broken doses during the apyrexia, being careful to have the patient well under the influence *on the approach of the next paroxysm*. The other, advocated by a more decided and radical class, that of giving it in large antipyretic doses during the paroxysm. The latter was comparatively new and thought by many to be dangerous. Now just at this period, in 1868, with hundreds under my care, when quinine, from high tariff and monopoly, was costing me \$5.00 an ounce and I was furnishing the quinine, I was called to see a robust man, 25 years of age suffering with a sharp attack of bilious remittent fever. It was noon of the second day. I prescribed a number of doses of quinine to be taken during the remission until the fever rose again. At noon of the next day, I found him worse, with all the symptoms that characterize that class of disease in that climate. High fever, headache, dry tongue and skin and scanty urine. In searching around I found all of the quinine put away, not in my patient, but on the shelf. I promptly poured the contents of all the papers (about 25 grains) into one paper and then down my patient's throat, and left him. This was practically giving it all at the commencement of the sweating stage, as the fever had fallen at one o'clock of the previous day. The next day when I called at noon, I found him nearly well. He told me he felt no inconvenience, but that he had never sweated so in all his life. The question immediately arose with me, why not give all or nearly all of the quinine at the beginning of the sweating stage. From then until now I have found no reason why I should not but many why I should. In 1881, before I knew of Laveran's discoveries, identifying certain micro-organisms as the cause of malaria, I read a paper before the Rolla District Medical Society on the subject of malarial diseases from which I quote as follows:

"Without entering into any discussion as to whether malarial fevers, pains and other remittent and intermittent symptoms were the result of derangement of the nervous system, or of diseased conditions of the viscera or the blood, I will assume that the last be adopted as the truth and that it is conceded that the disease consists essentially in a change of the blood. There are a great many and to my mind conclusive arguments in favor of the last assumption. Some indicating the existence of chemical changes, some the presence of foreign substances or the absence of the normal constituents, others seeming to show the presence of living organisms, either animal or vegetable. Without attempting to examine the arguments for these various opinions at this time, I will state at once that I adopt and act upon the belief that the blood contains a foreign element; second that it is desirable to neutralize or destroy this element; and third, that it is necessary to eliminate it and its products from the body. It is plain that if we assume, that the malarial element consists of a material, a substance however intangible

we must make provision not only for its destruction, but for its elimination. For if it is a chemical body the administration of a drug to be absorbed into the circulation, designed to act upon that body, will imply the formation of another body. In other words we know that annihilation does not take place, but a third body is produced; and if the malarial body consists of a vegetable or animal organism which we assume to be killed by the quinine, we must also assume that the blood will remain contaminated by the presence of this defunct vegetable or animal matter. Any one reading the literature of this subject will perceive how little is said of the prompt elimination of the supposed micro-organism, or of the quinine which is a foreign substance, or of the products which are the result of the meeting of the other two.

“Without going into this very interesting subject we will recall the well known and indisputable fact that the free diaphoresis is the natural and most desirable termination of a malarial paroxysm. Let us imagine the case of malarial fever, remittent, quotidian, tertian, double tertian, quartan or any other variety, open or masked. Now whether the chill is a well marked cold chill, a dumb chill or one of the varieties of masked chill, we find the process of digestion interrupted; food taken into the stomach a short time before, not being digested, soon beginning to undergo fermentation and, if not vomited before that process has advanced, coming up intensely sour, or being retained until the fever rises, causing severe headaches and sometimes, especially in children, convulsions. Now it is useless to give quinine at this time, for even if it is not vomited, little of it will be absorbed, and that little will produce unpleasant cinchonism (which takes place only to a limited extent under the method which I advocate) so that we fail to get either the curative or the sedative effect of a large dose. During the paroxysm, the water which the patient calls for, and which I let him have freely, is generally thrown up, having, however, produced the good effect of cooling and washing out the stomach. We recognize at this period the increased heat of the stomach and other viscera, anorexia, continued vomiting of the water as fast as it gets warm in the stomach (and I will remark here, that this kind of vomiting of large draughts of cool water is a relief; that it cools the stomach, reduces temperature and is easily accomplished if the supply of water is free and not too cold), the suspension of all the secretions, the urine being scant and high colored, the skin, the tongue, the eyes, the lining membrane of the nose, all being dry and parched. Purgatives do not act. The bowels are dry, the patients have headache and are often delirious. The same blood goes coursing around and around through the vessels, or owing to its deteriorated condition and lack of reciprocal action between it and the capillaries, becomes blocked either in the periphery or in the central organs; stasis taking place



and showing us those conditions so injurious and so often fatal which we call congestion. Often when the circulation is almost stopped, when the changes in the capillaries have almost ceased to take place, the heart beats with effort and increased frequency until as death approaches the force dies out; while often the frequency is increased, ending in mere fluttering, long after the radial pulse has ceased to beat. The increased action of the heart during the fever, does not imply natural tissue waste and repair, but rather, an effort to overcome an impediment. At this stage of the fever, we find great difficulty in securing the retention and the absorption of quinine and the elimination of it and the defunct plasmodia.

"We may now at the crisis, if the case is urgent, especially if we know the type, anticipate the decline by the hypodermic administration of the quinine or by the hypodermic use of a good dose of morphia, followed in 15 or 20 minutes by a large dose of quinine by the mouth; but as a rule the fever should be tided over with the help of various well known means which will reduce the suffering of the patient. Among others, cold affusion to the head and to the *interior* of the stomach only and warm baths or packs to the lower limbs. Experience and the reasons advanced corroborate each other in making it improper to use general cold affusion, or to allow the patient to lie in a draft, when we are all-desirous of securing free diaphoresis—this very important means of elimination. It is the means adopted by nature or rather it is the natural phenomenon which follows the fever; and reason and experience teach, that instead of checking, we should promote it; and immediately upon its establishment, when all the other functions are resuming their sway, when the mouth becomes moist and the stomach retentive of food, we should give 15 to 20 grains of quinine at one dose; then a slice of toast, or two crackers and a cup of coffee, or other light nourishment but *not* milk. Twice as much quinine may be given with impunity and often with benefit, but experience shows that amount to be generally enough. This dose may be repeated in a few hours and the patient kept covered up and asleep. A liberal supply of water or other fluid, should be furnished to supply the waste by the skin and kidneys which is generally enormous during this period. The water is not thrown up and is promptly absorbed, promoting the sweating which often saturates the bedding, often staining it some, and sometimes causing an odor. When the process is continued for some hours, the patient should be rubbed dry. The exhibition of quinine should be stopped several hours before the next paroxysm. The same treatment must be pursued during and after the next paroxysm, and if another paroxysm does not occur the same treatment must nevertheless be pursued at the *same hours* the *next* day, as if it had occurred, and in reduced doses for two or three days and then in doses of six grains at bed time and three at breakfast time for a week

longer. This general rule is applicable with such variations and with such auxilliary treatment as will suggest itself to an intelligent practitioner, to all forms of malarial disease, intermittent of all kinds, bilious remittent, all complications of malaria with pneumonia, typhoid fever, etc. In fact continued experience convinces me of the advantage of administering quinine in large doses at the commencement of the sweating stage."

The above was written twenty-five years ago and it was with great pleasure some years after that I read the following summary of the results of Baccilli's experiments to find out the best time to administer quinine. He says "quinine even in doses of one gramme (intravenous injection) is not capable of cutting short a febrile paroxysm when given in the beginning or even three hours before \* \* \* \* Given at the decline or at the end of the paroxysm it either prevents the next or essentially reduces its intensity."

Now let us take a very cursory glance for we cannot enter upon a study of the recent discovery of Laveran and his followers, and we will find clearly that malarial diseases proper are caused by a protozoon called *plasmodium malariae*, an animal micro-organism; that this animalcule invades the blood corpuscle, increasing within it until it reaches its full development, destroying the corpuscle; that the parasite contains a nucleus with nucleoli; that at the time of sporillation the nucleus divides; that segmentation is coincident with the paroxysm; that immediately following the paroxysm fresh hyaline bodies appear in the red corpuscles.

I merely wish here to suggest that the reasons for this practice, based upon assumption and analogies, may now be based upon the latest discovery which we can demonstrate by the microscope. At what period would we expect to get more quinine into the blood with least inconvenience to the nervous system of the patient than at the beginning of the sweating stage? When would we expect quinine to have the most destructive effect upon the parasite than when segmentation or sporillation is taking place when the corpuscles have broken? When can we expect more rapid elimination of the products of this destructive action than during the sweating stage, when all experience shows that all of the excretive and other functions are fully re-establishing themselves?

In conclusion let those of us who reason from clinical observation, remember that experience shows anemia, hypertrophy of the spleen and heart, diseases of the liver and kidneys, malarial hematuria, and many other evils, to be the direct or indirect results of prolonged or badly treated malarial fever; and let those of us who "have to be shown" remember that under the microscope this destructive hemocytolysis can be seen taking place with each successive brood of parasites.

Then let us not hesitate at the first assault to make a counter attack and save every precious corpuscle that we can.

Then with the change of a word, we can adopt for our motto a line from Seneca, who in writing about a very different malady, said "Quisquis in primo obstitit repulitque plasmodium malariae, tutus ac victor fuit."

#### DISCUSSION.

Dr. C. A. Mitchell, Blythedale:—In the rigor of malaria there is capillary congestion; quinine relieves the engorgement. With the heart at this stage trying to drive the blood on and probably already weakened, if we are not careful, we are likely to cause the very thing we are afraid of. But I endorse the doctor's statement that the time to give quinine is when the moisture is beginning, after relaxation has taken place. Then we can get results. Giving such large doses may do for the old practitioner who knows well the history of his patients and being certain that they have a strong heart, but unless we have such a history we must be careful how we give such large doses or we may cause a paralysis of the heart.

Dr. Johnson, in closing: I am sorry not to have heard the *subject* of my paper "The Best Time to Give Quinine," discussed.

I had hoped to have my clinical experience corroborated, and I am disappointed that none of the students of pathology and physiology noticed the points, either favorably or adversely, on which I desired information, namely, the prompt elimination of quinine and also of ptomaines and leucomaines. I have tried to find to what extent the quinine is eliminated by the skin. I know that the greater part is thrown off by the kidneys. It seems reasonable to sweat patients and I have known numbers of cases almost cured by sweating.

I notice a criticism of my large (?) doses. I consider fifteen grains of quinine a very moderate little dose provided prompt elimination by bowels, kidneys and skin is secured. I would rather take fifteen grains at one dose than three grains three times a day. I once took, at one dose, half a handful of a mixture of the heavy sulphate of cinchona and sulphate of quinine. I suffered greatly—had a "Doctor" with me for hours at my wife's request. Next day I rode eighteen miles horseback in a hot sun and never suffered any special inconvenience and never had another chill for eight months.

In the prompt absorption and prompt elimination lie success in the use of quinine.



## SUPPURATION OF MAXILLARY SINUS WITH INVOLVEMENT OF ETHMOIDAL CELLS AND SPHENOIDAL SINUSES.\*

BY H. J. JURGENS, M. D., EDINA, MO.

The increase in the last decade of diseases of the nasal accessory sinuses is sufficient excuse for the report of this case. I think that in its etiology, mode of extension and amount of tissue involved, my case is analogous to the majority of cases of nasal disease. As in all other ailments to which the human body is heir neglected prophylaxis, either on the physician's or the patient's part or both is the great error to be corrected. The patient by his procrastinating tendencies is usually the chief offender. The physician by his desire to please and lack of backbone the accessory. In this case the physician in charge had to contend, not only with the patient's whims but also with the deleterious influences of medieval folk lore and legend upon officious neighbors, who ever insist upon the maxim "do not have a tooth pulled while in a pregnant condition." Mrs. B., Aetas 24, mother of two months' old baby had been suffering since her second month's pregnancy from the effects of a carious molar tooth. Her physician advised her to have it pulled. After consultation with the neighbors his advice was rejected, on account of her delicate condition. She soon developed symptoms of antral empyema which caused her so much pain that she resolved to follow her physician's advice to have the tooth removed. Dr. E. S. Brown proceeded to comply with her request, and also treated the empyema for some time by washing the antrum through the alveola with permanganate solution which returned through the nostril, indicating that the ostium maxillare was patent. In spite of this thorough treatment the patient did not improve; on the contrary the right cheek swelled up to an enormous extent whilst the orbital floor was raised so much as to cause prominent bulging of the eye ball. This condition of affairs continued until after her confinement when I was called in to see the case. At this time the pus had broken through the facial wall leaving an opening just below and internal to the infra-orbital foramen. I could easily introduce a probe through this sinus into the antrum. The pus contained much osseous detritus and debris giving it a gritty sensation when rubbed between the fingers. Examination of the nasal fossæ was entirely negative, the mucosa covering the corresponding meati appeared a little darker but from the middle or superior meatus proper there was no discharge. The patient could breathe readily through both sides and did not complain of any nasal

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\*Read at the annual meeting, Jefferson City, May, 1906.

trouble whatever with the exception of pain at the root of the nose, which I attributed to reflex irritation of the nasal nerve. Her general condition was good. She was not then or never had suffered with influenza, which together with the history of the case caused me to consider it as of dental origin. I determined therefore to make an opening through the canine fossa to curette the antrum and clean it out thoroughly. Consent to this procedure was reluctantly given. A trap-door opening was made into the canine fossa, and besides removal of granulations a small cannula was inserted through the upper sinus through which the pus had broken, in order to allow thorough washing out. The lower opening was packed with sterile gauze and changed each day. This treatment was continued for two months without any perceptible improvement. On the contrary the process seemed to be retrogressive. The corresponding turbinates commenced to show congestion and soon necrosis set in with its accompanying symptoms, of which pain stood out in bold relief. She soon was unable to breathe through the right nostril, and also her sense of smell gradually diminished until finally it disappeared entirely. The case went from bad to worse. The entire right nasal fossa filled with a mass of caseous material of exceedingly foul odor. To still further complicate the case she commenced to complain of difficulty in swallowing. Examination of the throat revealed a rounded indurated spot about three quarters of an inch in diameter upon the vault of the pharynx. Thinking that I might have to deal with a sphenoiditis I attempted to examine the fissure leading to the superior meatus but this together with all other landmarks had completely disappeared. Her general condition though good until now began to show the effects of sepsis. The temperature continually changed from  $97^{\circ}$  to  $102^{\circ}$  and  $103^{\circ}$  accompanied by chilly sensations; pulse gradually diminished in volume and increased its rate, running up to 110. Light was painful; she had violent pains in brow and eyes, muscles of scalp and neck. Hearing diminished and melancholia made its appearance. In view of such symptoms foreboding no good I refused to continue with the case unless treatment was left entirely to my own judgment, to which consent was reluctantly given. The condition of affairs to me seemed to be very bad. From all appearances I judged that most of the facial wall of the antrum was destroyed, that the ethmoidal cells, both anterior and posterior, were converted into a cheesy mass; that there was involvement of the sphenoid as evidenced by the indurated spot on the pharyngeal wall. The literature on the subject at my disposal, while giving accurate information as to the operative technique of each separate sinus did not cover the possibility of necrosis of the sphenoid, or perhaps of the basilar process of the occipital bone. It is true I found report of malignant diseases of sphenoid in complications with cerebral disease. I found reports of acute sphenoiditis and ethmoiditis, but of the chronic variety

nothing was to be found. I have since seen a resume of the work of European Rhinologists by Stuckey in which cases similar to mine and even worse are reported but at the time I had my case, namely in 1897, I could find nothing. Being thrown largely upon my own resources I decided to deal with the antrum first. An incision was made on the cheek, following the naso-labial fold for cosmetic after effects. The upper extremity of the incision terminated in the external opening of the old sinus internal to the infra-orbital foramen. The anterior bony wall of the antrum or rather what was left of it I removed with the chisel since it was all diseased. I curetted the entire interior of the antrum and broke away most of the nasal wall so as to allow free drainage through the nose. After thorough washing with peroxide I closed the external wound with silk. I now proceeded to determine the extent of posterior involvement by introducing a bullet probe in a direction upward and backward. I did not meet with any resistance until a point three and one-half inches from the anterior nasal spine was reached indicating that I was somewhere in the neighborhood of the basilar process of the occipital bone. I was surprised to note, however, that I could not deviate laterally, which to my pleasure indicated unilateral involvement. Recalling the proximity of the cavernous sinus to one side, the pons Varolii and basilar artery above, I was very much afraid to use any force whatever but finally mustered up enough courage to introduce a small blunt curette and by slow and careful backward and forward movement removed all the caseous material until nothing was left but solid bony walls. Of the ethmoid nothing was left on the right side but the perpendicular plate, which effectively had prevented the infection of the opposite side. After flushing the cavities with saline solution they were packed with sterile gauze. The stitches in the cheek were removed on the fifth day. There never was any recurrence of suppuration, in fact I discharged my patient two weeks after the operation cured. She reports within the last month that she has been entirely free of any trouble with that side, also that her sense of smell has returned.

While the diagnosis of this case offered no particular difficulty there are some points of interest which duly considered may be beneficial to us.

*The Source of infection.* All authorities agree that dental caries and influenza are the most potential factors in the production of sinusitis. Influenza could be easily excluded from this case since the history clearly pointed to the carious tooth as the etiological factor, though why the necrotic process extended on to the facial surface and not through the maxillary tuberosity on to the external wall, was and still is a mystery to me.

*Ostium Maxillare.* By several authorities it is claimed that antrum empyema can be treated through this opening. While it is true



that in this case fluids injected through the alveola returned through the nose it does not prove that the reverse can be done. It should be remembered that this opening lies in the middle meatus, therefore considerably above the floor of the antrum, and as a consequence a certain amount of fluid, even if it were possible to inject it through the ostium, must remain behind, while the overflow alone can pass out through that opening. To concede that even by experts such can be done as a routine would be absurd. Cryer<sup>1</sup> of Philadelphia, claims that it is impossible to pass a probe through the nose into the antrum since anyone can demonstrate upon the skull the fact that the ostium is directed from behind forward and outward.

*Mode and extent of involvement.* Observing the anatomical relations of the different sinuses we conclude that since the ethmoid and sphenoid aid to make up the roof of the nasal fossa, they must be on a higher level than the opening of the antrum. While it is true that with the head erect the inferior surface of the sphenoid is on a level with the maxillary sinus, nevertheless it must be borne in mind that the opening of the sphenoid is contracted by articulation with the sphenoidal turbinated bone, and that by a small rounded opening in the upper part of this little bone the sphenoidal sinus communicates with the posterior ethmoidal cells. If we then accept as a surgical principle the effect of drainage we must conclude that involvement of the sinuses, secondary to maxillary sinusitis, is either rare, or systemic influences do their share to bring about this condition. On the other hand, given a primary infection of the sphenoidal, ethmoidal or frontal sinuses, a secondary infection of the antrum could be produced very easily, especially if the direction of the ostium maxillare be remembered.

*The unilateral character of the case.* In this connection it must be remembered that at no time the left side gave any evidence of disease. The possibility of this in the ethmoid is readily seen, since here the two sides are separated by a strong plate of bone, "the perpendicular plate." In the sphenoid, however, while it is a fact that a septum exists, it is usually only rudimentary and, according to Gray, often contains several small foramina, by means of which the two sides communicate with each other. My patient must have had an abnormally strong sphenoidal septum to prevent infection of the other side. Since the infection seemed to extend upward I am rather surprised that the frontal sinus escaped, especially when it is remembered that the anterior ethmoidal cells are in direct communication. Only the great facility for drainage which nature has provided through the nasal fossa into the pharynx, or the anterior nares can explain the escape of this sinus, as well as the lack of cerebral and other involvements. When we consider the large number of foramina establishing communication between the nasal fossa and other cavities we are astonished to find so

small a number of cases complicated by subdural or even cerebral abscesses through the cribiform plate; infection of the orbital cavity through the nasal duct; abscess in the spheno-maxillary fossa through the spheno-palatine foramen; infection of the ear through the Eustachian tube, and other infections to the pharynx. That such complication do occur can not be gainsaid. Stuckey<sup>2</sup> reports a case of ethmoiditis complicated by cerebral involvements; Herbert Tilley<sup>3</sup> reports a case of ethmoiditis followed by subperiosteal abscess of frontal and parietal bones, sinus thrombosis and cerebral abscess. Stuckey<sup>4</sup> in his condensed resume, cites a large number of cases presenting involvement of adjacent cavities. The possibilities for mischief in connection with nasal accessory sinus disease are so great that it behooves us to extend our research in that direction.

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<sup>2</sup>Ibid., April, 1906.

<sup>3</sup>Progressive Medicine, Page 361, 1900.

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## VALUE OF JAUNDICE AS A DIAGNOSTIC FACTOR IN DISEASE OF THE BILIARY PASSAGES.\*

BY JAMES Q. CHAMBERS, M. D., KANSAS CITY.

One cannot, in the time allotted to this feature of our work this evening, review the question in a searching manner. At the same time the following brief outline suggests one viewpoint from which a fuller study of the subject may be approached.

Jaundice is that symptom in a variety of affections characterized by a deposition in the tissues of the body of pigment ingredients normally excreted in the bile, and manifesting itself beneath the skin and visible mucous membranes as a greenish yellow, and sometimes brownish, discoloration, of varying intensity. Biliary pigment matter is derived from the hemoglobin of red blood corpuscles. Hence, in those instances of rapid or extensive disintegration of red corpuscles, too great for the proper removal of the same by the liver, occurring in the advanced anemias of many grave diseases, a change of color is noted in the cutaneous surface, simulating true icterus to be presently described, and to which the name *Hematogenous Jaundice* has been applied. Reference is made to this spurious form not that it has any close relationship with disease of the biliary passages, but because at a cursory glance the condition frequently simulates true biliary stasis. A little care in the study of an individual case usually suffices to determine whether obstruction to the output of bile truly exists or whether the discoloration is due to excessive hemolysis. That confusion in

\*Read before the Jackson County Medical Society, meeting of May 8, 1906.

this regard is possible three recent cases in the writer's experience demonstrate. The one by reason of weakness, and yellowish waxy discoloration presented the aspect of a probable malignancy encroaching upon the biliary outlet; a microscopic analysis of the blood speedily showed the case as one of spleno-myelogenous leukemia. A second, the victim of severe epigastric and substernal pains, plus a yellowish tint of skin, was growing daily yellower under the drastic whip of chologogues. The case was one of angina pectoris incident to cardiac sclerosis, with the muddy pallor that accompanies a grave cardiac lesion. The third, an advanced case of interstitial nephritis with aortic and mitral regurgitation, has a color of manila straw. He might well be called jaundiced. Yet his urine is light in color and specific gravity; his stools are neither clay colored nor fermented; in fine, his liver is no more implicated than are his other digestive organs.

True jaundice, the jaundice of liver origin, of some defective output of bile, is termed hepatogenous. It seems expedient to view this under two separate divisions. The first variety we may denominate *Parenchymatous Hepatogenous Jaundice*, in which there is no obstruction in the gross bile ducts, no distal obstacle to the escape of the bile into the gut. Rather is there a suspended function of liver cells and biliary radicles; a cloudy swelling, a round cell infiltration, even an actual degeneration, due to sundry intoxications. The jaundice of malaria, yellow fever, acute yellow atrophy of liver, of acute infectious jaundice or Weil's disease, of Hanot's biliary cirrhosis, of arsenical and phosphorus poisoning, and possibly of abscess, pyemia and carcinoma is under this head. With the slowly developing agencies of this group the jaundice may be very slight, or even for a great while absent, owing to the merely partial suspension of hepatic parenchyma and owing to the highly probable compensatory and hypertrophic tendency of unaffected liver cells.

The second variety we shall consider as *Cholangic Hepatogenous Jaundice*. In this there is no grave perversion primarily of the corpuscular cycle, no appreciable interruption to the elaboration of bile, but an obstacle in the larger ducts to the outflow of the biliary product. It is within the confines of this territory that one must find the true value of jaundice in the diagnosis of bile duct troubles; but unless the observer has before him the panoramic view outlined in the previous headings he may easily interpret either the hematogenous or parenchymatous jaundice as instances of bile duct obstruction.

Naturally the possibility of a mixed jaundice may at times place the student in a hopeless dilemma from which he does not emerge until enlightened by operative or post-mortem evidence. For example, in carcinoma of the liver one may find the parenchyma pretty generally involved and productive of only slight icterus. Now add to this a catarrhal condition of the greater ducts that may ensue at any moment,



or perhaps a metastatic deposit in the lymph glands at the hilum encroaching upon the hepatic or common duct and immediately there is not only a parenchymatous jaundice but also an obstructive cholangic form to intensify and confuse the original picture. Again in grave malaria the rapid consumption of red corpuscles causes hemogenous pigmentation. To this is not uncommonly added parenchymatous interference plus even a catarrhal blocking of the large bile ducts—a jaundice then of triple origin falling in all three of our classifications.

However, this third or cholangic variety, due solely to bile duct affection, is essentially always in the nature of an obstruction, due to occlusion more or less complete of the biliary outlet. This blocking may be occasioned in countless ways. Briefly classified one has:

#### CLASS A. *Plugging of Duct.*

1. By swelling of mucosa and by thickened catarrhal products, ordinary catarrhal jaundice induced commonly by extension from a gastro-duodenitis, or coming as a concomitant inflammation to many of the common febrile infections e. g. influenza, typhoid, secondary syphilis, malaria, etc. Passive congestion in the failing stage of heart lesions lends to gastric, duodenal and biliary catarrh with the production of jaundice. Yet in the event of this when one considers the cyanotic damage progressing in the liver tissue, he is persuaded that parenchymatous jaundice may be playing a part. In passing we may in this connection refer to the trauma caused by the successful passage of a biliary calculus, leaving in its wake a transient catarrhal or more permanent cicatricial stenosis producing jaundice, while the true culprit has made its escape into the intestinal tract.

2. By tumors: Carcinomata, exanthemata, lipomata, etc., plugging the duct or its orifice, have been reported.

3. By foreign bodies, e. g., gallstones, cherry and plum stones, intestinal parasites, etc. In a general way the intensity of the discoloration is proportionate to the degree of the occlusion. Yet a lodged calculus by a valve like action may give rise to an intermittent jaundice, colicky attacks, chills, fever, and sweats, the so named "Charcôt's intermittent," so highly diagnostic of stone in the common duct.

#### CLASS B. *Encroachment on the Calibre of the Ducts.*

1. By stenosis, which may be congenital and fatal in the first few days of life, or the stenosis may result from cicatricial changes.

For example, the laceration of a passing stone, or an operative wound may result in stricture. Typhoid post-ulcerative narrowing is possible. Likewise peritoneal bands and adhesions of local peritonitis, where a perihepatitis, or peri-duodenitis exists, may cause occlusion.

Under this heading may also be considered that very interesting r. alady, chronic interstitial pancreatitis, obliterating the common

duct lumen, closely simulating malignant disease of the pylorus with jaundice, and yet as the surgeons will explain, quite amenable to operative relief.

2. By tumors or over-growths impinging on the ducts and closing lumen, e. g. tumors of liver, gall bladder, stomach, pylorus, pancreas, portal glands, pregnant or fibroid uterus, etc.

3. By such kinking or congestion of the lumen as may be induced by the dragging of attached mesenteric tumors, floating kidney, prolapsed stomach, and the like.

It will be noticed that these agents of interference working upon the gallbladder and cystic duct alone are not apt to produce jaundice. Indeed there is no anatomical reason why they should. So that the absence of jaundice in troubles of the bile duct system is a diagnostic point in favor of the gallbladder or cystic duct being the seat of involvement.

A word as to symptomatology. The sudden appearance of, or increment of discoloration reaching its height in a few days, the yellow sclerotics, the porter-colored urine, high in specific gravity, showing yellow froth on agitation, and responding to Gmelin's test for bile, the whitish, pasty coated tongue, the foul breath, the complete loss of taste and appetite, the nausea, the gray stools, foul and fermenting from absence of bile, the itching skin, the mental hebetude, the pulse of 60 or less, all point to a complete occlusion of the hepatic or common duct from whatever cause.

With this cursory, incomplete review of the subject one can see some of the limitations of jaundice as a pathognostic symptom of biliary duct involvement. The hematogenous factor must be set aside or accounted for, the parenchymatous element must be borne in mind and identified by the age, sex, occupation, case history, and collateral symptoms. Finally in the cholangic or obstructive cases neighboring organs and conditions must be carefully scrutinized lest they be the prime offenders to which the biliary stasis is merely secondary. With all these excluded there remains a group of cases, some diagnostically simple, some more complex, in which the occurrence of jaundice defines the malady with tolerable certainty to the gall duct system.

# Journal Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies.

Published Monthly under the supervision of the Publishing Committee

ADDRESS ALL COMMUNICATIONS TO 534 NORTH VANDEVENTER AVENUE, ST. LOUIS.

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Number 4

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E. J. GOODWIN, M. D., EDITOR.

PUBLICATION COMMITTEE:

C. M. NICHOLSON,

WALTER B. DORSETT.

B. M. HYPES.

W. G. MOORE.

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## EDITORIAL.

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### INFLUENCE OF COUNTY MEDICAL SOCIETIES.

That a medical society should represent the best interests of a medical community goes without saying, but the feasibility of the truism that a society composed exclusively of physicians and devoted to the prosecution of medical science, can have as its component parts men of diverse opinions on medicine and yet be of one opinion as to the feeling of fellowship, has been doubted. The keystone to the arch upon which rests the success of an organization is undoubtedly the feeling that directly a doctor is made a member of a society he has a fixed position, irrespective of prejudicial trivialities which other members may entertain towards him. Without this keystone the stability of a society is not unlike a house of cards—the slightest criticism wafted toward it will cause its downfall. A corporation should desire strength of body, growth in numbers, and earnestness of work.

Strength of body, meaning the health of a society, can be achieved only when unanimity prevails; growth in numbers when a society's attractiveness is such that many desire to join; and earnestness of work when trivial dissensions arising outside a society are not allowed to influence the attitude of any member towards the value and worth of another member's contributions to science. The times are not ripe for the realization of an ideal society, if they ever will be, and we only wish to point out some of the salient features which constitute success when a number of men are brought together in the interests of medicine. "In unity there is strength" is as applicable to us as it is to statehoods and legislatures. The strength of county societies will bear fruit in making our state association a power whose demands will not go unheeded.

As yet our state association suffers through the indifference of some county societies and reflects but feebly that oneness of thought



we desire. When the demand for righting a wrong is brought before our legislative bodies in such a way that no legislator can doubt its sincerity, since it is not the wish of one county but the wish of all, there will be no recourse to evasion but a hearty co-operation. Lack of enthusiasm on the part of a legislator whose support is absolutely necessary to rectify a defect, can be due only to his not receiving from the state association a clear, concise and unprejudiced presentation of the case in hand. This can only be done as was said above by the members forming the various bodies, uniting in a magnificent whole whose power shall dismay the enemy and convert the most indifferent legislator into an active agent whose smallest suggestion will carry weight.

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### DEDICATION OF ST. LOUIS MEDICAL SOCIETY BUILDING.

On September 15th, the St. Louis Medical Society formally dedicated its new home at 3523 Pine St. The widespread interest in the event was attested by the large attendance (nearly 200) of members and guests.

The meeting was called to order by President Homan who dwelt especially on the decline of personal animosities which in the past had done so much to retard the progress of scientific work in the Society and congratulated the members on the development of a more tolerant spirit incident to better mutual acquaintance. The first formal address was by a pioneer of the Society and ex-President, Dr. Le Grand Atwood who gave an historical sketch of the Society in its earlier years, interspersed with many amusing anecdotes of the fathers of the Society. Dr. Warren B. Outten spoke interestingly of the "St. Louis Medical Society of Today," and Dr. Wm. G. Moore prophesied its future. Alternating with the formal addresses came the reports of chairmen of committees directly concerned with the building and dedicatory program, Drs. Morfit, Kieffer, Funkhouser and French. The latter, as Chairman of the Committee on Business Affairs, made a special plea for contributions toward lifting the debt which still hung over the building. How effectively he performed this task may be judged from the fact that within a few minutes nearly \$1,900 were pledged.

In the course of the evening it was announced that the set of portraits of the ex-presidents of the Society, hung on the north wall of the auditorium, had been generously donated by Dr. F. L. Henderson.

At the conclusion of the exercises Dr. Robert Barclay offered resolutions expressing the thanks of the Society to the members and committees especially concerned in the erection of the building.

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The work of canvassing the state by counties is progressing very

favorably. Six men are in the field having been assigned to the following councilor districts: 1st, 8th, 10th, 15th, 16th, 18th and 19th.

We anticipate a splendid increase in the membership as a result of the work of these representatives. Not only an increase in numbers will follow but a wider, broader spirit of fellowship and a tolerance of individual views that shall make action on questions of importance so harmonious that no dissenting voice will be raised.

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#### THE MEDICAL RECORD: AN ENEMY OF THE AMERICAN MEDICAL ASSOCIATION.

For many years the New York *Medical Record* was the leading medical weekly in America. Next to the *American Journal of the Medical Sciences*, it represented, better than any other journal, the best there was in American medicine. William Wood & Company, the owners, for nearly fifty years—practically since the present nominal head of the house, William H. S. Wood, in 1863 became a member of the firm—have conducted an exclusive medical book publishing business. The imprint of the firm has been on the title page of some of the best medical works this country has produced. This medical book and journal publishing business is presumed to have been and to be a paying one. The journal publishing part, especially the *Record*, undoubtedly has been a source of a comfortable annual revenue.

The patronage of William Wood & Company, as medical publishers, came from the better class of physicians—those who read and think. Their journals have been of such a character as also to appeal to the intelligent in our profession. Under such circumstances, one would naturally suppose that they would have realized that the movements inaugurated by the American Medical Association against the nostrum evil, and for a better condition in the profession, would be endorsed by the thinking class of physicians—that is, by those to whom William Wood & Company were indebted for their success in the past and on whom they must depend for their support, as medical book publishers, in the future; hence, that they would, for policy's sake at least, have supported the Association in its laudable efforts. But they have done just the opposite.

Through their periodical, the *Medical Record*, they—or their employe—have seen fit, in four editorials, to attack the American Medical Association, its officers and its present activities. Their criticisms—if these attacks may be so dignified—ramify into every phase of the Association, its management, and its work. Their object, it is quite evident, was to discredit the officers of the Association, to reflect on the Association itself and to create dissension among its members. The animus prompting them also is perfectly plain to those who know how the subscriptions to the *Record* have been falling off and also to those who have observed the mass of nostrums in its advertising pages. The

House of Delegates, the Board of Trustees and all the officers of the American Medical Association welcome honest criticism and suggestions that are made for the purpose of bettering conditions, but they resent attacks made to disrupt and to disorganize.

The editorials consist of insinuations and deliberate misstatements of facts and bear evidence of having been written by one who has little, if any, knowledge of the history of the Association, of the details of organization or of the work the Association is doing. These attacks should be ignored, but, appearing in a journal that in the past has been considered reliable, some of its readers have believed that there must have been some basis for the attacks, not realizing that the *Record* would stoop to malicious misrepresentation. Further, certain medical journals, for well-known reasons, have made all possible use of the matter. Knowing that their own outcries of "graft," "fraud" and "clique" were laughed at, they could now say, "You did not believe what *we* printed; now read what the *Medical Record* says."

It would be more satisfactory to quote *in extenso* from these editorials—for this would give our readers an idea of what they are, in which case no comment of ours would be necessary—but we have not the space. However, although the editorials were in the form of vague generalities, insinuations and inuendos, it evidently was the intention of the editor of the *Record* to have his readers accept the following propositions:

1. That the policy and the management of the American Medical Association is in the hands of a self-seeking "ring or clique."

This insinuation is constantly made by the editor of the *Record*. What evidence has he for such a statement? On what authority does he insinuate that the House of Delegates composed of men elected from every state and territory in the Union and changing its membership every two years, is or can be dominated and controlled by a few men for their own purposes? Such a charge is absolutely false, is supported by no evidence whatever and is a direct insult to the representatives of the profession, who are chosen by their fellow physicians to administer and protect their interests. Never, in the history of the American Medical Association, was there assembled a more representative, fearless and independent body of men than that composing the House of Delegates at Boston.

2. That the "financial reports of the American Medical Association have been disquietingly analogous to those of insurance companies and have dealt in glittering generalities."

Had the solicitude of the editor of the *Record* regarding the affairs of the American Medical Association extended over a longer period than that of his own incumbency of his present exalted position, he would be aware that the reports of the Board of Trustees for the last few years have been far more complete and more detailed than at



any other period of the Association's existence. We recommended to the editor of the *Record* a casual perusal of the Association's proceedings, not only for the current year, but for preceding years, before he attempts to misinform his readers.

3. That there is, in the minds of honest and intelligent members of the organized profession, a suspicion of "graft;" that the accounts of the Association have been "juggled;" that "more than 23 per cent. of what should have been received in dues and subscriptions remains unaccounted for."

This also is untrue, and, furthermore, it is an infamous libel on the members of the Board of Trustees, who have, without one cent of pay and at a sacrifice of their own time and professional work, looked after the business of the Association. The members of the board are men of high rank in the profession and of unblemished personal character. On what grounds does the editor of the *Record*, by covert insinuation and baseless inuendo, attempt to question their integrity? The standing of each of them is as much above suspicion as the editor of the *Record* could possibly wish his own to be. What evidence or proof has he to justify him in attacking honorable members of his own profession? As a gentleman and a member of a scientific brotherhood, it is incumbent on him either to retract his statements or to produce such evidence as will justify his malicious utterances.

4. That the House of Delegates at Boston was dissatisfied with the report of the Board of Trustees and that it was denied details regarding the business of the Association.

This statement every member of the House of Delegates knows to be false. The report of the Board of Trustees was adopted by an unanimous vote. During the reading of the report, the complete pay-roll, showing every cent paid in salaries and wages to the 150 and more employes of the Association, from the Editor to the errand boy, was submitted to the House. Detailed statements, covering every item mentioned in the auditor's report, were submitted, or were ready for the information and inspection of the members of the House. We fear the *Record* was not very well served by its Boston representatives and we suggest that hereafter more reliable and accurate data be secured as the basis for future attacks. Incidentally, we are constrained to ask by what right the *Medical Record*, or its owners, the commercial house of William Wood & Co., demand the publication of the pay-roll of the American Medical Association for the scrutiny and information of any and all commercial interests. Is such a list published by any fraternal organization, by any company or by any corporation anywhere?

5. That the surplus of the American Medical Association is nearly a quarter of a million dollars.

The editor of the *Record* has perpetrated the sophomoric error of confusing surplus with assets. The actual surplus, as shown by the

auditor's report, published in *The Journal*, was \$60,084.21. The assets of the American Medical Association, as set forth in the same report, were, on January 1, 1906, \$247,482.91, but the editor of the *Record* failed to note, or was unable to grasp the fact, that this included real estate and buildings, furniture and machinery, stock and cash on hand, as well as bills and accounts receivable. We have the statement of the editor of the *Record* himself made some months ago, that "the editorial and the business departments of the *Record* are absolutely separate." If his conception regarding the surplus is to be taken as a sample of his financial ability, we can not but commend the foresight of William Wood & Co. in making such an arrangement.

6. That the Treasurer of the Association, to whom the editor of the *Record* sarcastically refers as a "prominent bank director and successful financier," is responsible for the investments of the surplus of the Association.

The most superficial acquaintance with the Constitution and By-Laws of the American Medical Association would have shown the editor of the *Record* that the Treasurer is simply the custodian, under heavy bonds, of the surplus funds of the Association, which he holds subject to the order of the Board of Trustees. The Trustees themselves, and not the Treasurer, are responsible for the investment of the surplus funds of the Association.

7. That the Association has become so big "that the number of papers presented in the various sections is too great to permit of their being assimilated by the hearers, or profitably discussed."

If our self-appointed critic had been in touch with the section work, he would have known that there have been for the last four or five years fewer papers than ever before; that sixty, seventy or eighty papers in a section was not an uncommon thing in years gone by; that now, by a general law, the number is limited to forty and that some of the sections have fixed a still lower limit, some as low as twenty-five. As the editor of the *Record*, so far as we know, never attended a session of the Association, he is excusable for this misdirected criticism.

8. That there is no need of the proposed medical directory; that the proceeds of the directory will increase the income of the Association to half a million dollars; that the sales of the book to non-members and the profits of the advertising will pay the cost of production and that the publication of the American Medical Directory is absolutely without excuse.

The consideration of the Directory demands a chapter by itself, which we propose soon to present to our readers. Suffice it to say at this point that the editor of the *Record* either has no conception of the objects of the Directory and what it will stand for, or else purposefully ignores them. These matters have been fully discussed in *The Journal* time and again. In *The Journal* November 18, 1905, for instance, appeared a detailed statement of the plan and scope of the work, which

evidently the editor of the *Medical Record* has never read. This, however, is no excuse for his ignorance. His profound suggestion that the Association give away twenty thousand—now it would be twenty-six thousand—copies of the Directory to its members is too puerile for comment. We once more pause to congratulate William Wood & Co. that their editor has no connection whatever with the business department of the *Record*.

9. That there is "loudly expressed dissatisfaction with the present management all over the country, which is assuming definite form in the organizing of new state medical societies, and even serious talk of a rival national organization."

Will the editor of the *Record* kindly name any state in which a new state society is being organized? The Association office is presumed to know the actual conditions regarding medical organization throughout the country. But, evidently, this presumption is unfounded. The *Record* has discovered a condition that was not known to exist. Now, what are the facts? Never before was there less opposition to the plan of organization than now prevails in every state and territory, all but two being organized in a uniform basis. Until two years ago, there was opposition in several states; now there is practically none. In Georgia, immediately after the reorganization of the State Association, there was some disaffection on the part of a few physicians and some transient agitation for the organizing of another state society, but this amounted to nothing. In one country in Michigan, six dissatisfied physicians agitated the organization of a new state body, but nothing definite resulted. This movement was never looked on seriously by those connected with the state society. The disaffection in both instances was the result of purely local conditions in no way related to the American Medical Association and was merely a remnant of the disaffection that at one time prevailed in many states. Never has the profession been more united, never before has it been so influential, never have there been so few local jealousies, and never has there been a more hopeful outlook in every way than now.

10. That the Walker resolution, introduced at the Boston session, was defeated through the efforts of the officers or the Board of Trustees or their friends, and that an attempt was made to suppress an investigation of the business affairs of the Association.

Again, we are led to deplore the inaccuracy of the reports received by the *Record*. The facts are these: The moment the reading of the resolution was concluded, it was at once tabled by the practically unanimous vote of the House. There was no discussion. The members of the House cared for none. There was no time for the officers to express themselves even had they desired to do so. The statement that the resolution was opposed by the officers, the trustees or their friends is absolute falsehood, unless the entire membership of the House of Delegates is included under the designation "friends." The As-



sociation and its officers are fighting secrecy and deception and are not practicing it.

11. That at Boston "a strenuous effort was made to get rid of the Editor, and that so great has become the dissatisfaction with his administration that this endeavor might have been successful had the general body any voice in the management of the Association."

This statement is unqualifiedly false, as all who attended the Boston session well know. There was an opposition, it is true, and a bitter one, but it was limited to the horde of nostrum vendors who have been getting rich by humbugging and deceiving our profession, and to the owners or attaches of those medical journals nourished by the same brood, who allow themselves to be used as the mouthpieces and tools of proprietary interests. The Editor of *The Journal* of the American Medical Association knows full well that he is hated with a most intense hatred by these gentlemen and their allies, and that they would stop at nothing to secure his "dismissal," but he also knows and knows thoroughly and well, that the "management" was fully and completely endorsed by 95 per cent. of the physicians at the Boston session, and, for that matter, is endorsed by a like proportion of the physicians of the country, who know the truth of what is going on.

So much for the "facts" regarding the American Medical Association as set forth by the editor of the *Record*. Just a word as to that gentleman himself. He graduated in the spring of 1877 and so has been a member of the medical profession for 29 years. During all this time, his interest in the American Medical Association and in medical organization was so great and his enthusiasm so uncontrollable that in March, 1906, just ten weeks before the Boston session, he became a member of the American Medical Association. Truly, not without reason has the zeal of the new convert become proverbial. Had he devoted a small part of the 29 years of his professional life to a more careful study of the organization of which he was, at last, to become a member, he might have been able to discuss the Association's affairs intelligently, if not truthfully. During all this time, men whose membership in the organization number years while his numbers weeks were earnestly and unselfishly striving, not only to build up the American Medical Association, but to bring about better conditions in our profession. During the same time, what has the editor of the *Medical Record* done in this respect? Yet he now arrogates to himself the right to criticise and, by implication and by baseless insinuations to brand these same men as "boodlers" and "grafters."

Is it probable that the business interests of an old and hitherto reputable publishing house will be enhanced by the use of its journal as a medium for such malicious, unfounded and unwarranted attacks? We think not. However we commend this thought to the consideration of William Wood & Co., of New York.—(Editorial in *Journal of the Am. Med. Assn.*, September 15, 1906.)

## COUNTY SOCIETY NOTES

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### CAPE GIRARDEAU MEDICAL SOCIETY.

At the August meeting held at Cape Girardeau, the program consisted of a "Symposium on Gastro-Intestinal Disorders Occurring in Infantile Diarrhea." The September meeting was held at Jackson and the subject of typhoid fever was up for general discussion. Both these meetings were well attended; the papers presented were interesting and instructive and the discussion by the members showed that this society is composed of men who are interested in society work and appreciate the importance of the meetings.

The next meeting will be held at Cape Girardeau on Monday, October 1st.

The Cape Girardeau District Medical Society will hold its meeting at Cape Girardeau in October and a very large attendance is anticipated.

J. D. PORTERFIELD, JR., M. D. Secretary.

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### HENRY COUNTY MEDICAL SOCIETY.

Henry County Medical Society met in regular session Wednesday, September 12, thirteen members being present. Dr. Love, representative of the American Medical Society, was also present.

Dr. Gibbins read a paper on "Post Eclampsia" and reported a case. The paper was well discussed. Dr. R. D. Haire read a paper on "Local Anesthesia," in which he reported a number of cases showing the efficacy of this method of producing anesthesia. The paper was freely discussed by the members, many of them relating their experiences with local anesthetics.

Dr. J. E. Kunkler reported a case of tetanus in which the patient neglected to obey instructions carefully and the treatment therefore was not satisfactory. This paper brought out very general discussion.

Dr. Love was called upon to address the meeting which he did and explained his mission in connection with the efforts of the state association to increase the membership in the county societies. He said only nine per cent. of the physicians in the county were now members of the association and urged that strong efforts be made to induce all reputable physicians to join the local society.

Dr. Douglass read a communication from the officer of the state medical association in which it was stated that a representative would visit the county to assist in increasing the membership of the society and requested the members to lend all assistance in this direction.

On motion it was decided that new members elected at this time

would be received as members until January, 1908, on payment of dues and fees for one year.

F. M. DOUGLASS, M. D., Reporter.

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#### HOWARD COUNTY MEDICAL SOCIETY.

Regular meeting was held at Fayette on September 7th, there being a good attendance of the members.

Dr. Bonham made report of the meeting of committee on Public Health and Legislation in St. Louis on July 10th (for full report see THE JOURNAL, August, 1906.)

Dr. Bonham reported a case of hysteria, which brought out a free discussion. Dr. Watts reported a case in which the left kidney was extirpated. Dr. A. W. Moore's case of cancer of the pancreas was reported verified by recent developments.

C. W. WATTS, M. D., Reporter.

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#### LIVINGSTON COUNTY MEDICAL SOCIETY

At the regular meeting of Livingston County Medical Society held at Chillicothe, July 11, Dr. W. M. Girdner was elected secretary to fill the vacancy caused by the resignation of Dr. J. F. Cherrington who has removed to Denver, Colorado. Dr. J. C. Shelton was elected to membership.

Dr. W. L. White, presented a tubercular patient for examination. The case proved to be very interesting and was thoroughly discussed.

Dr. W. R. Simpson reported a case of carbolic acid poisoning. This report brought out a general discussion particularly in regard to antidotes.

The next meeting will be held at Chillicothe on October 17th.

W. M. GIRDNER, M. D., Secretary.

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#### PLATTE COUNTY MEDICAL SOCIETY.

The regular monthly meeting of the Platte County Medical Society was held in Platte City, September 5th.

After a general discussion as to the best course to pursue in preparing the programs, the following physicians were requested to prepare papers and open discussions on whatever subject they might choose, the same to be presented before the society at the next meeting: Paper by Dr. H. M. Clark, discussion by Drs. Spence Redman, Alva Naylor and G. C. Coffey. This paper to be followed by a general discussion of typhoid fever.

The secretary was instructed to publish the names of all members of Platte County Medical Society in the local papers at least once a month.

The next meeting will be held on October 3rd.

J. C. COFFEY, M. D., Secretary



## STODDARD COUNTY MEDICAL SOCIETY.

Stoddard County Medical Society met in regular session at Essex, September 5th.

Dr. Dawsey Ryan of Bernie was elected to membership.

The morning session was devoted to routine work and at noon the society adjourned for dinner. At the afternoon session Dr. W. B. Wynne presented a paper on "Incipient Tuberculosis." He reported a number of cases in which treatment had been very satisfactory. The paper was highly complimented by the members and brought out a full discussion of the subject.

Dr. T. C. Allen read a paper on "Medical Organization." Dr. Edward Moore read a paper on the treatment of Puerperal Eclampsia." Dr. T. B. Wingo reported a case of "Laparotomy under Local Anesthesia." The case was one of umbilical hernia in which general anesthesia was contra-indicated. The operation under local anesthesia was satisfactory in every particular.

The next meeting will be held at Acorn Ridge the first Wednesday of November.

GEORGE W. VERNON, M. D., Reporter.

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JOHN T. HODGEN DISTRICT MEDICAL ASSOCIATION.

At a meeting of the John T. Hodgen District Medical Association the following resolutions were adopted:

Whereas: In the recent investigations of several of the leading life insurance societies of the United States, no breath of suspicion of wrong-doing has been found to attach to the medical department of these societies, and

Whereas, the said medical department constitutes the cornerstone of the solid foundation upon which these gigantic financial institutions have rested until they have become arrogant and domineering, and

Whereas, they have recently issued to the medical examiners throughout the country an ultimatum as to fees which they expect to pay for their services, therefore be it

Resolved: That it is the sense of The John T. Hodgen District Medical Association that the recent act of the old line life insurance companies in reducing the fees of their medical examiners and in demanding the written acceptance of the same is both arbitrary and unjust;

Resolved: That such action is an insult to the intelligence and integrity of the medical profession and is characteristic of the disposition of corporations to over-ride the interests of the individual without in any way consulting him;

Resolved: That this association resent this action and pledge its membership to make no examination for such insurance companies as

have made the above mentioned reduction, for less than five dollars without regard to the amount of the policy;

Resolved: That this association recommend the adoption of similar resolutions by all county medical societies in the state of Missouri, and that these resolutions be published in the secular press in each county in this district, and in the medical press of the state, and that a copy of the same be sent to the medical directors of each life insurance company interested.

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#### JOHN T. HODGEN DISTRICT MEDICAL ASSOCIATION OF NORTHWEST MISSOURI.

The physicians in the counties of Harrison, Worth, Gentry, and DeKalb met at Albany on August 9th and organized the John T. Hodgen District Medical Association of Northwest Missouri. Dr. W. E. McKinley, the district councillor, was elected temporary chairman and Dr. G. W. Whitely secretary. A number of cases were presented for examination and discussion after which the following officers were elected in the permanent organization: President, A. H. Vandivert, Bethany; 1st vice-president, Jas. C. Guinn, Clarksdale; secretary, A. C. Long, Denver; treasurer, J. W. Conard, Albany.

Drs. McKinley, Whiteley and Conrad were appointed a committee to draft a constitution and by-laws. One of the conditions of membership in the society requires that applicants shall be members of the state medical association, except in the case of honorary members. Meetings will be held quarterly.

The next meeting will be held at Albany on the first Tuesday in September at 10 a. m.

# JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

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Volume III

NOVEMBER, 1906

Number 5

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## ORIGINAL ARTICLES

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### AN UNUSUAL RETROPERITONEAL TUMOR IN THE MESO-COLON SIMULATING IMPACTED FIBROID OF THE UTERUS.\*

BY WALTER B. DORSETT, M. D., ST. LOUIS.

My chief reason for reporting the following case is to accentuate the statement made by the late Dr. Goodell, that a positive diagnosis of intra-abdominal disease is best made after the abdomen is opened.

Another reason is I wish to express the belief that the gynecologist of today should be able to cope with all intra-abdominal troubles whenever found in the course of his efforts to relieve a patient of a seemingly gynecological disease.

While in the great majority of cases the average gynecologist is able to diagnosticate purely gynecic disease by the employment of well known measures, he still is frequently confronted with cases in which after every known method has been used he is somewhat chagrined to find an entirely different condition present from what his educated senses have told him.

It is particularly true when he encounters post-peritoneal growths. This is true on account of the generally rather loose attachment that these growths have to fixed and unyielding structures, as the spinal column, the bony pelvis and in a comparative degree the heavy muscles of the back and the loins. Here we have an abundance of connective tissue that permits a mobility not found elsewhere in the body.

It is no wonder then that these post-peritoneal tumors will encroach upon and even displace organs that are naturally remotely located.

The spleen, the stomach, kidney and even the pancreas have been found in the pelvis.

With these few remarks I will now relate the following case. Mrs. J. S. B., age 48, married, mother of three children, no miscarriages presented herself for examination.

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\*Read at the annual meeting, Jefferson City, May, 1906.



The subjective symptoms were as follows: Pain in the gastric region radiating into the left thigh; constant nausea accompanied by vomiting which sometimes gave temporary relief. This had lasted in a more or less degree for eleven years. In spite of this most distressing symptom she was fairly well nourished. During this long period of illness she suffered with a heavy dragging sensation in the abdomen and back.

On the exposing the abdomen, with the patient in the recumbent posture, abdominal palpation was made. This revealed a fairly well defined mass at the brim of the pelvis. Bimanual palpation revealed a somewhat fixed mass in the pelvis and a crowding down of the pelvic viscera. This mass could not be dislodged from the pelvis by pressure exercised from below in the proper axes of the pelvis.

Taking into consideration the history of the case and the symptoms above expressed a diagnosis, somewhat tentative, was made of an intramural fibroid impacted in the pelvis. On the following day, Jan. 31st, 1906, the abdomen was opened.

On inspection, a rather flat mass was seen lying at the brim of the pelvis closing off the pelvic cavity from the general abdominal cavity. Along the brim of the pelvis, anteriorly could be seen a bowel, which on careful examination proved to be a part of the transverse colon. This bowel encircled the anterior border of the tumor. It was only with some difficulty that it could be dislodged as its posterior border was under the promontory of the sacrum and its anterior border was wedged in behind the pubic bone. The whole mass was crowding the small intestines into the pelvis. Superimposed on the tumor was a coil of colon from each side and above this again was the stomach. After a careful inspection it proved to be postperitoneal in origin and lay between the layers of the transverse meso-colon.

The insinuation of the fingers at a point corresponding to the sacro-iliac synchondrosis between the tumor and the side of the pelvis, and with traction made upwards, the mass was delivered into the abdomen. An effort was made to turn it back upon itself which was futile and it was decided to attack it from above.

An incision was accordingly made at right angles to the bowel, care being taken to avoid blood vessels. The fibrous capsule was with some effort peeled off and the tumor removed. The inferior surface on the right side was adherent to the right ureter, which passed between a pair of the lobules of the tumor. No vessels required any special ligation and the sac was closed with a running suture of catgut.

Before closing the abdomen an inspection of the liver and gall bladder was made. Quite a number of small yellow nodules were seen scattered over the free superior surface of the liver and a few indurated glands along the longitudinal fissure. The gall bladder was free from stones.



FIG. 1. Showing the cells flatwise. The myoglia fibrils are seen at the periphery of the cells. Stained with acid fuchsin and orange G, phosphomolybdic acid.

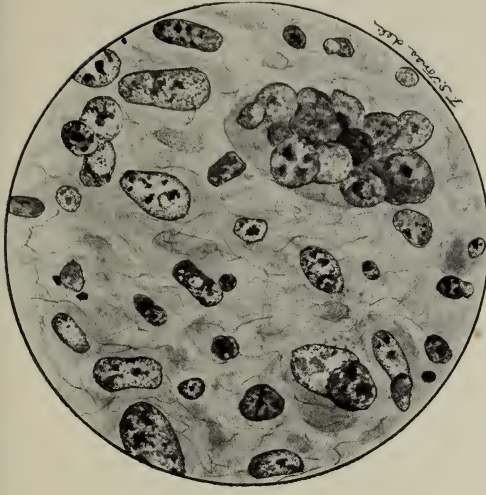


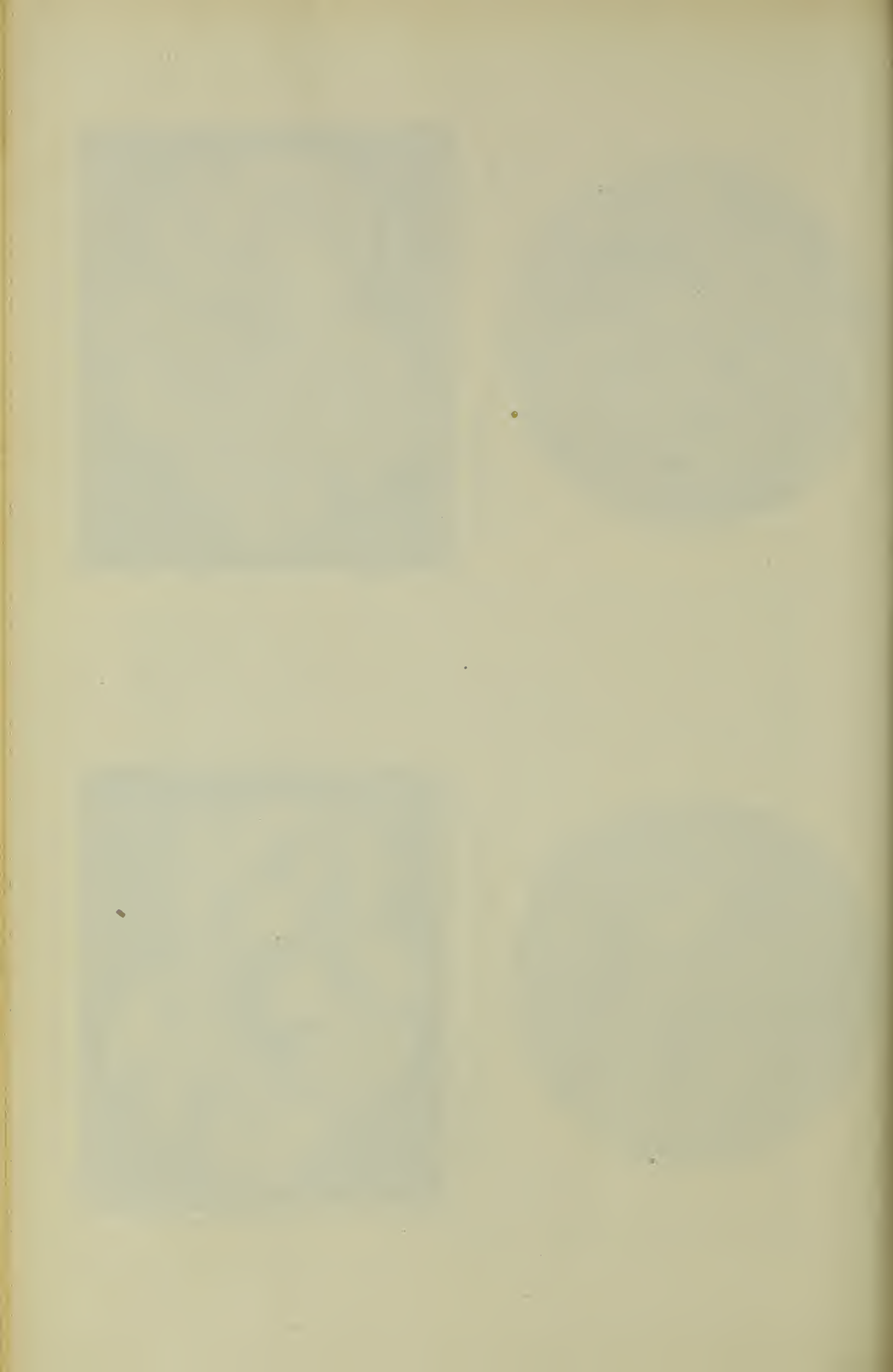
FIG. 2. Cross section showing large multinucleated cells. Stained with hematoxylin-eosin.



FIG. 3. (1-5 Original Size.) The Free Surface of Tumor.



FIG. 4. (1-5 Original Size.) Cut Surface of Tumor.





On account of the yellow masses scattered over the liver it was presumed that we had to deal with a malignant growth that was certain in time to kill the patient.

The patient made an uninterrupted recovery and left the hospital within a month, feeling well. One month afterward a letter received stated that the patient had improved in health, but a later letter states that the vomiting was again pronounced.

The literature of the subject of retroperitoneal tumors is rather scant. Hahn, Ziegler, Delafield and Pruden scarcely mention the matter. Klebs says they are rare and devotes a very limited space to their consideration.

In a report of fifty-seven cases by Harris, from 1830 to 1897, there were 33 in which either an incorrect diagnosis or no diagnosis was made; indefinite 8; ovarian tumors 3; spleen displaced, chirrrosis of liver, hydatid of liver, intestinal strangulation, stricture of rectum, etc., 6 diagnosticated correctly. The mortality has been large—deaths 40; no data obtained, 7; recovered, 10. This report of Harris is collected from the reports of Hyden, Pean, McRiddle, Bemis, and Brushini.

The following report of the pathologist, Dr. Ralph L. Thompson, is of interest. I wish to thank Dr. Thompson for his painstaking and thorough analysis of the subject matter of this contribution to medical literature.

#### PATHOLOGIC REPORT.

The following is the result of the pathologic examination of the specimen submitted by Dr. Dorsett.

Gross description: Specimen consists of a firm, lobulated mass, 16x10x8 cm. in diameter with several smaller detached masses, the largest of which is 4x6 cm. in diameter. The masses are grayish-white in color. The surface is smooth and shows many elevated nodules separated by depressed areas.

On section the tumor is grayish-white in color, firm and in great part trabeculated. There are occasional soft, flesh-like masses of pearl gray color, and homogeneous. There are also small yellow opaque areas throughout and occasional soft, red to red brown foci, the latter not over 2 cm. in diameter.

Microscopic description: A variety of pictures are found in the tumor, depending on the part of the growth from which the section is taken. The greater part of the mass (the firm gray areas) consists of bundles of smooth muscle fibres in a connective tissue stroma. The muscle bundles are seen running horizontally and obliquely and also appear in cross section. The nuclei of the cells are prominent. They are rod shaped in horizontal section; oval in cross section. They vary somewhat in size. Some are long and slender others shorter and slightly oval.

The connective tissue stroma which appears between the muscle bundles varies in amount and is fairly rich in nuclei. In places are areas of hyaline degeneration giving a homogeneous appearance to the stroma.

Blood vessels are fairly numerous. In many parts of the section fairly large vessels with little development of the vessel walls are seen, filled with red blood corpuscles. In this part of the growth there is little that differs from sections of ordinary leiomyoma, such as are best seen in the so-called fibromyomata of the uterus.

Passing to the softer flesh-like parts of the tumor, quite a different picture is encountered. While there is a suggestion of the structure previously described, scarcely any stroma can be made out. Everywhere throughout the section are large cells, some round, many spindle shaped, with large irregular nuclei. Many mitotic figures are seen. Some cells are seen with numerous closely packed nuclei. Between the cells there is a varying amount of fibrillar structure which takes the ordinary stains for connective tissue. In addition to the ordinary intercellular fibres there can be seen in appropriately stained sections another set of fibrils which stain differentially. These fibres lie in, or on, the periphery of the cell protoplasm and the ends of fibrils extend some distance beyond the limits of the cell. In places these large cells can be seen invading the myomatous tissue previously described. One section shows what is apparently bits of hyaline cartilage. The soft red brown areas in the tumor show hemorrhage and various forms of degeneration. In places are large masses of fibrin. Considerable pigment is seen in these areas both within the cells and extracellular. Focal areas show masses of hyaline droplets of varying size. In the partly degenerated areas are seen some of the largest, most irregularly nucleated cells and many mitotic figures.

Borst (*Die Lehre von den Geschwuelsten*, Bd. I. p. 221) discusses this question and calls attention to the difficulties in determining between undifferentiated muscle cells and embryonic connective tissue cells. According to Borst, if the undifferentiated cells are derived from smooth muscle cells the growth should be designated leiomyoma sarcomatoides.

This tumor corresponds in all its essential details to a growth described by Mallory as malignant leiomyoma (*Journal of Medical Research*, Vol. VIII, No. 2, 1905). Specimens from this tumor submitted to Dr. Mallory were diagnosed by him as malignant leiomyoma.

It has long been a disputed question among pathologists as to whether or not a sarcoma could arise from smooth muscle cells. Some observers claim to have observed such a transition. Others prefer to believe that when such growths arose the origin was from the connective tissue cells of the stroma. Such tumors were designated then as

large spindle cell or mixed cell sarcoma, or as a mixed tumor (myosarcoma), according to the interpretation of the origin.

The recent work of Mallory (*l. c.*) on tumor classification, based particularly on the more careful study of the intercellular substances produced by certain cells, seems to make possible the establishment of the origin of such tumors as the one previously described as undoubtedly from smooth muscle cells.

Smooth muscle cells possess certain well known fibrils, the "binnen fibrillen" of Heidenhain and the "myoglia fibrils" of Benda. It is the characteristic appearance of these latter fibrils in many of the large cells in the fleshy part of the growth previously described that suggests their close relationship with ordinary smooth muscle cells. Unfortunately tissue from this tumor was not fixed until several hours after its removal and therefore these myoglia fibrils are not as well preserved as they might otherwise have been. These fibrils are extremely sensitive to post mortem change and are best demonstrated in tissue fixed immediately after excision while it is still life warm. However, in certain parts of the growth these characteristic myoglia fibres were seen lying at the cell periphery and extending indefinitely beyond the limits of the cell. It is important to determine whether or not these tumor cells tend to differentiate themselves into smooth cells. While I was not able to definitely settle this point to my own satisfaction there is much in the section to suggest such a transition.

That the exact determination of the nature of these cells is not always an easy task, even with an added knowledge of fibre production is evident when we consider not only the similarity of the cells but also the close similarity of fibrils produced by muscle and connective tissue cells. The differentiation of fibrils can not rest on staining peculiarities alone. Fibroglia fibrils, the delicate fibrils produced by connective tissue cells in tumors and inflammatory tissue which Mallory has described, stain by the same methods as do myoglia fibrils. These fibroglia fibrils, however, are much more delicate than are the myoglia fibrils. In connective tissue growths moreover, the fibre production seems to occur in direct ratio to rapidity of growth. So that the more quickly the tumor grows the more numerous are the fibrils. In myomata as Mallory has shown the fibre production is more irregular and the myoglia fibrils do not diminish but rather increase perhaps with the increased production of intercellular substance.

We have then a tumor in which the cells are larger than spindle cell sarcoma cells, irregular, with fairly well defined protoplasm. The intercellular connective tissue fibrils are not distributed evenly about the cells as they are in sarcoma, but occur irregularly. In addition the cells produce coarse peripheral fibrils which are characteristic of smooth muscle cells and which differ in their morphology from the more delicate (fibroglia) fibrils produced by the cells of connective tis-



sue origin. All of these points seem to show that the tumor is derived from smooth muscle rather than from connective tissue.

It is necessary to designate the growth a malignant leiomyoma, in view of its origin, rather than to call it a mixed sarcoma or myosarcoma. There is no objection to the term proposed by Borst, namely, leiomyoma sarcomatoides.

The malignancy of these growths appears to be a variable quantity. Some grow with great rapidity but do not seem to give rise to metastases or invade surrounding tissue up to the time of their removal. Others of slower growth sometimes give rise to metastases. In this case the growth was comparatively slow and the patient showed apparently good recovery after operation. However, numerous small gray nodules were noted in the liver surface at the time of removal which suggested metastases. Unfortunately none of these nodules were taken for microscopic examination.

Tumors of the mesentary are usually benign and include practically the whole group of simple histoid growths as well as mixed tumors and teratomata. Cysts of the mesentery are much more common than solid growths. I have found no instance in which malignant leiomyoma has been reported in this situation, although no doubt some of the tumors of supposed connective tissue origin that have been reported as "large spindle cell sarcoma" or "mixed cell sarcoma" were really identical with the growth here described.

The origin of these growths may perhaps be best accounted for as developing from fetal inclusions of smooth muscle tissue. Smooth muscle is found in the wall of the blood vessels that traverse the mesentery as well as in the walls of the intestine. Hyperplasia of this tissue might furnish a starting point for the growth.

#### DISCUSSION.

Dr. C. G. Geiger, St. Joseph: We have very little literature on the subject and I have seen only one case, almost identical with Dr. Dorsett's case. My patient did not have the symptoms given by Dr. Dorsett in regard to vomiting, but suffered very severely with constipation. A diagnosis was made of interstitial fibroid. The uterus was almost immovable, and was removed. The patient died two years afterward from supposed malignant tumor or sarcoma. It is almost impossible to make a positive diagnosis in this class of cases without opening the abdomen and Martin was about correct when he said, "I have ceased to guess what is on the inside of the belly." We can always make a more positive diagnosis when we expose the tumor. In my case there was no examination by the microscope but from the termination I thought it was a malignant condition similar to the case reported by Dr. Dorsett. The patient said she had felt a growth for several years about the location we found when we opened the ab-

domen. She was about fifty years of age and had had several children. In Senn's book on tumors there is a small article on tumors posterior to the peritoneum; I believe there were in all only about sixty or seventy cases on record. We find most of the tumors of this character in women of middle age, or at least in women who have borne children. All the cases on record were in women who had borne children.

Dr. A. F. Hertzler, Kansas City: The transformation of myomas into sarcomas is denied by practically all practitioners and the majority of pathologists. But so good a man as Dr. Pfannenstiel said he has seen a case. How highly developed tissue like muscle could degenerate into a tumor of a connective tissue character is a biologic question which is pretty hard to answer. From a practical standpoint, to present the practitioner's side, I would question seriously whether in time we will not have to list these tumors among sarcomas, and not class them as malignant myomas.

Dr. Dorsett, in closing: There are one or two symptoms that I did not detail in the paper. The small bowel, almost the entire length of the ileum, was crowded into the pelvis, or below the tumor, yet there was no history of constipation. The ureter passed through a niche in the tumor yet the function of the kidney was not interferred with so far as we could tell from the history of the case given us by the patient and her friends after the operation. The ureter was very much dilated in running up to the kidney and for a distance of about four inches it was with difficulty that I recognized the structure. My first inclination was to assume that the growth was in the mesentery of the small bowel, but I finally recognized the connection with the colon. The patient recovered from the operation and went home. From latest advices I imagine she will not live long. I may be criticised for operating, but I will say that several months of usefulness and happiness were added to this patient's life, and in view of this fact I think the operation was fully justified.

## THE PRESENT STATUS OF PSYCHOTHERAPY.\*

BY DORA GREENE-WILSON, M. D., KANSAS CITY, MO.

No physician can be acquitted in the court of his own conscience, who from prejudice voluntarily closes his eyes and refuses to investigate any means that promises to increase his power to alleviate human suffering. The well equipped physician leaves no stone unturned in his efforts to prepare himself thoroughly for his work, but investigates all therapeutic methods and makes use of such knowledge as he is able to obtain.

Valuable methods of treatment sometimes have their origin with the laity, the ignorant, or the charlatans, who make use of them, not comprehending their significance, but noting results. These methods may, in the light of scientific research and investigation, evolve principles of therapy, invaluable when placed in their proper relation in the armamentarium of the physician. It is thus that mind-cure, or in scientific nomenclature, psychotherapy, seems to be finding a place in orthodox medicine.

We cannot successfully deny the fact, so powerfully forced upon us during the last few years, that in the hands of christian scientists, mental-curists, Apostolic and magnetic-healers and other charlatans and quacks, many genuine cures have taken place. Perhaps not a few in which drug treatment has failed at the hands of several reputable physicians.

In the light of this mortifying fact would we seek an explanation, and casting aside all prejudice, earnestly search for the source of healing power.

We of the medical profession boast of being scientific and certainly with reason; but we have long centered our interest too much on the organic and too little on the psychic side of the human being. One writer says that "for years the only difference between the veterinarian's art and that of the physician, was that of clientele!"

It is so much easier to get at the organic, which seems more tangible, if not more practicable. But when we can demonstrate that cures wrought by psychotherapy can be accounted for on scientific principles and natural laws, and that they are not the vain imaginings of vagary, fanaticism, ignorance and deception, then would we wrest from the quack the weapon of his successful combat with disease, and elevate it to its proper place in legitimate medicine.

We find ourselves face to face with these questions: How much influence, if any, has the mind and mental representation in causing or harboring functional or organic disease? If it is a therapeutic meas-

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\*Read at the annual meeting, Jefferson City, May, 1906.



ure, to what class of disease is it adapted? How is it to be applied? What scientific explanation of its action have we? In total, what is the present status of development of psychotherapy?

Let us in retrospect, hastily pass over its history. We find that psychotherapy is really as old as the healing art. Traces are found in ancient mythology and we know it was used by the Egyptians and Hellenes. Whether expressed in the wild incantations of the tribes of Africa, who believe pain is the evidence of possession of evil spirits, who can thus be exorcised, or the modern application of suggestive therapeutics on a scientific basis, the principle is the same.

Christ made notable application of the laws of psychotherapy. He seemed to fully understand the principle when he said, "thy faith hath made thee whole." The Gallilean did many so called miracles, which considered from the medical standpoint, are instances of the efficacy of psychic healing. In two cases he annointed the eyes of the blind making special mention of the faith of the afflicted.

In one instance, the blind man was "possessed of a devil," the scriptural formula of nervous disorder. These three cases must have been functional, and their cure due to powerful suggestion. Hysterical amaurosis is not at all uncommon. As soon as the afflicted had faith to see, they could see. In one case Christ took the man aside, and used spittle upon the eyes. This method of suggestion was used by many others. Emperor Vespasian according to Tacitus, cured those who fell at his feet, beseeching him to cure, in the same way. One man Christ sent to the pool of Siloam to increase and develop his faith.

But Christ's most interesting work was in cases of so-called demoniacal possession and palsy. There are five cases of diabolism mentioned and several cases of palsy, among them the old neurasthenic at the pool of Bethesda, the man let down through the roof whose bearers were commended for their faith, the man with the withered hand and the Centurian's servant, received what the christian science friends call "absent treatment." The old chronic, ready to try anything, waited among the blind and halt for Christ, whose firm assurances aroused his feeble will power and he was made whole, took up his bed and walked.

The man let down through the roof was evidently a victim of hysteria. The Centurian's servant had had a hysterical fit, followed by pseudoparalysis and he "lay sick of the palsy, grievously tormented," while his master searched for the Great Physician.

There are in this day, many instances of functional paralyses and health, while calling on the parents of his lady love, to ask her hand numerous cures of same under influence of strong emotion, or powerful suggestion. Most of us have seen some of these cases. Roosa recites the case of a sudden and profound deafness in a young man, in perfect in marriage. Not strange to say, after a favorable answer, he recov-

ered. There are three reported cases of Jesus raising the dead, but inasmuch as in one case Jesus himself said "the damsel is only asleep" it is not a violent stretch of the imagination to hold that the other two were also in trances.

A trance is a spontaneously induced hypnotic sleep and is usually deep and may simulate death and last for years. Wier Mitchell has collected twenty cases of protracted sleep. We all know of some of these cases.

We might go on and mention all of the twenty-one cases of recorded miracles, but enough has been said to demonstrate that Christ's healing was psychical. "In his own country, did he not many mighty works, because of their unbelief." Lack of confidence is ever fatal to suggestion. The world has failed to benefit from the teachings of Christ in psychotherapy, because it has regarded his work as supernatural and beyond the realm of law. Notwithstanding his plain declaration "He that believeth in me, the works that I do, shall he also do, and greater works than these." The New Testament is full of assurances that this particular power of Christ was not exclusively His, but belongs to all who have the grasp of faith.

The healing power of the royal touch of ancient times, of religious shrines in the past and present, of the bones of saints, of the Eddyites, magnetic and mental healers of modern times, are all of psychical order.

'Tis useless to deny these cures. In every instance the virtue lies in the stimulus which the visible means offers to faith, and not in any inherent healing qualities in aught outside.

The leaders in the development of modern psychotherapy were Mesmer, Charcot, Liebault and Bernheim. Mesmer's theory was that of transmission of a life-force which he called magnetism from one to another by direction of the will under hypnotic influence. He unconsciously applied the laws of suggestion, which he did not understand. The French Academy, in their report of his work, attributed his results to "imagination." Suggestion would have been a better term.

Charcot also applied suggestion under hypnotic influence induced by having patient look at a glittering object. In 1841 James Braid, in England, employed hypnotism in numerous diseases with success, and showed how the phenomena observed depended upon suggestion. Grimes, in America, and Liebault, in France, obtained independently the same results about the same time.

Liebault and his pupil Bernheim became well known advocates of the therapeutic application of hypnotism obtained by verbal suggestion.

In 1875 Charcot made an extensive report to the Academy of Science, of the phenomena of hypnotism, dividing the phenomena wit-



nessed into those of the cataleptic state, the lethargic state and those of somnambulism. We now classify hypnotism into two schools—that of Liebault and Bernheim, and that of Charcot and his pupils.

We cannot go into details of the nature and phenomena of hypnosis, but simply relate the development of the subject as a factor in the present status of psychotherapy; hypnotic suggestion, or psychic treatment under conditions of hypnosis, being one method of treatment employed at present. Farther along the line we find those who employ suggestion without inducing the hypnotic state.

Ballet, a French authority, in a recent article published in the *International Clinics*, classifies modern psychotherapy as follows: (1). Hypnotic psychotherapy; (2). Suggestive psychotherapy without hypnotism. (3). Psychotherapy without hypnotism. He adds that "hypnosis may be produced by having the patient look at a glittering object, by looking fixedly into his eyes, or by suggesting by word that he should sleep." The hypnosis produced varies in degree from profound sleep to mere somnolence. During these different hypnotic states the brain is especially apt to assimilate ideas, or to receive suggestions, consequently treatment consists in suggesting recovery; the second method, without hypnotism, appeals to the credulity of the patient and substitutes another's will for his; the third method is by persuasion and even in this there is much suggestion. This is a popular method among recent authorities.

Those who have carefully and conscientiously studied the subject of psychotherapy differ as to its exact power and the extent of its usefulness. We all unconsciously make use of it every day, in fact our success can be largely attributed to the impressions we make on our patients, in connection with material means used.

We all know the power of bread pills administered with cheerfulness and courage—that even a look or a gesture may become a suggestion to a patient to encourage or discourage him. But a clearer understanding of the laws would lead us to larger and less haphazard results.

Its use does not hinder the employment of appropriate remedies, but rather intensifies their action. Even in cases where drugs are not required they serve as means of indirect suggestion tending towards the desired end, because the people have learned to depend upon their use. We must take patients where we find them, having care to reinforce the medicines used with suggestion.

Much unnecessary mystery attaches to the term suggestion. Dr. Dercum, of Jeff New College says that "unfortunately it has been so closely associated with hypnotism that it has acquired an almost specific meaning." To make a suggestion, however, does not mean to impose a hallucination, or delusion upon a person in hypnotic sleep, but merely to convey to, or arouse in, the mind of another, some thought or idea in an unobtrusive manner.



It is a process always taking place, usually unconsciously, among the various individuals of the social body, and is, in itself the outcome of perfectly normal functions. Every experienced practitioner will admit that it powerfully affects his case for good or evil.

Mental factors influence, more or less, the physical condition of every patient suffering from acute or chronic disease, general or local. Even incurable cases it may assist materially in keeping the patient comfortable. Without stooping to any dishonest procedure or imitating the methods of the mind-curists, faith-curists or unqualified practitioners, self deluded and deluding, striking results can be achieved by simple and proper methods. Indirect suggestion is the form usually employed, but direct suggestion in the form of positive statement to the patient that he is improving and that he will recover, may be used.

The manner of direct suggestion must vary with the patient. With some a preliminary explanation of symptoms must be made. Care, tact and good judgment are the essentials of the successful application of psychotherapy.

The patient may easily be led to expect results too soon and thus lose faith in the physician and treatment. Again, the suggestion may be made too bluntly, or over-stated or exaggerated and as Samantha says, "not mejum enough," and thus fail, where one of moderate force would work well.

Disease is often a state of the entire individual and in order to effect a permanent cure, the mental attitude must be entirely changed.

Prof. DuBois, of Berne University in his work on "The Psychic Treatment of Nervous Disorders" makes the following statement: "If a person is impetuous, excitable, nervous, opinionated, easily aroused, or whatever the disposition may be, the most prominent characteristic is sure to modify both the disease and its cure; oftentimes it is the disease. The disposition is at fault, and the patient must be taught to overcome self with the will. A happy, hopeful, firm attitude of mind must be cultivated. It leads to new interests to inspiration, the cultivation of self poise and self reliance. This the christian scientists teach so successfully—not mere passing beliefs and states of mind and thought, which bring happiness, but that which becomes the life, the religion and education of the whole individual. The object of the treatment is to make the patient master of himself, and the means to this end is the education of the will, or more exactly, of the reason."

DuBois insists that psychoneuroses are amenable to psychotherapy *only*; being psychic, they require psychic treatment. Included in his list of psychoneuroses (from which he has eliminated the neuroses which are probably of somatic origin, and retained those affections in which the psychic influence predominates) are neurasthenia, hysteria, hysterical neurasthenia and the lighter forms of hypochon-

dria and melancholia. He does not, however, limit the usefulness of psychotherapy to the psychoneuroses in the hands of the specialist in neurology and the alienist, but adds that its influence is a great help to the general practitioner in the treatment of all diseases, and that surgery could not be practiced without it. To the surgeon it is of great importance when the prognosis must be revealed and the patient led to accept operative intervention; that it has ever been one of the highest qualities of the most successful practitioners.

The Journal of the A. M. A., March 31, 1906, contains the following excellent editorial entitled "The Physician and Psychic Treatment:"

All through the history of medicine it has been recognized that the influence of suggestion plays an important role in therapeutics. The physician's assurance with regard to the significance of symptoms and as to the prognosis of the case has always been acknowledged as distinctly curative in tendency. Suggestion, however, has always been considered of secondary importance, and in the organic affections this is especially true. In recent years there have been many developments pointing to the therapeutic influence of the mind over the body whenever suggestion can be used with good effect, especially in regard to so-called functional conditions. Nearly a century ago Mesmer claimed that a number of presumably serious symptoms could be effectively cured by suggestion either in the hypnotic condition or in the waking state. In more recent times the success of mental healing and of Eddyism has called renewed attention to these facts. The frequently announced new remedies that prove after a time to be not so effective as was at first thought, because their novelty has worn off, provides further confirmatory evidence of the therapeutic value of suggestion.

During the past decade a number of contributions to practical therapeutics have been made that recommend the use of suggestion, not as a merely secondary and accessory method of treating certain functional diseases, but deliberately, as an independent therapeutic agent. Two valuable contributions of this kind have recently appeared. In the last volume of "International Clinics," Dr. Pallet, physician to the Paris hospitals, directs attention to psychotherapy in nervous diseases. He emphasizes the undesirability of using hypnotic suggestions in most of the functional neuroses, since not infrequently it leads to a further weakening of the will and a consequent loss of control over nervous conditions. He has found, however, that ordinary persuasion and rational discussion of symptoms with a patient will often prove sufficient to remove symptoms that have been a source of suffering for a long period. Dr. DuBois, professor of neuropathology at the University of Berne, Switzerland, has published a book, which we reviewed recently, in which the proper use of psychic treatment for nervous diseases is systematically considered.

Both these authorities have picked out certain underlying conditions which are causative of nervous symptoms and which they have found amenable to psychic treatment. The most important of these are the fixed ideas and the so-called phobias or fears which often prove sources of so much worry to patients as to bring about extremely annoying and persistent symptoms. Fixed ideas are especially likely to rule over the digestive tract and must be removed before any of the



many forms of neurotic dyspepsia can be lastingly improved. Patients become convinced that they can not take certain kinds of food or that beyond a certain quantity their digestive organs are unable to dispose of it properly, and then a whole round of symptoms is likely to develop, because of the lack of nutrition consequent on food limitation. More is accomplished by carefully removing such fixed ideas than by the administration of the most nicely adjusted digestive remedies or the use of the most powerful ferments and enzymes to aid the ordinary ferment processes.

Phobias are especially likely to affect the heart and the cerebral circulation. Two very important sets of symptoms develop as a consequence. The heart palpitations of neurotic patients constitute one of the most important sets of symptoms with which physicians have to deal. Pseudo-angina-pectoris, with positive pain in the precordia and a sense of impending death, occurring in young persons without any signs of arterial degeneration or any symptom of a heart lesion, is the worst of these, but the symptoms may exist in minor degrees down to simple palpitation. Not infrequently the sleep is disturbed as a consequence of the patient's solicitude with regard to the possible consequences of these symptoms, and the result is another element in the vicious circle that gradually undermines the patient's physical condition. Insomnia itself in its varying forms, probably due more to disturbances of cerebral circulation than to any other single cause, comes under the same head and is often rendered persistent by the patient's anxiety as to whether or not he will be able to sleep, and his constant fear lest his loss of sleep should eventually lead to intellectual deterioration and perhaps to insanity.

Any physician of experience knows how difficult it is to treat such patients by any of the ordinary remedial measures. He is aware, also, how often such conditions are improved by the changed state of mind consequent on a series of interviews with a mental healer or the suggestive influence of some one who has insisted with authority that the condition can surely be cured. The deliberate use of persuasive suggestion in these cases is recommended by Ballet and DuBois as the most efficient remedy and one whose influence will persist longer than any other method of treatment. The suggestion may have to be repeated on a number of occasions, but if the physician can assure his patient that there is no organic lesion of heart or brain, either existent or impending, then improvement is usually a matter of only a short time. There seems to be no doubt that the deliberate use of this method of psychotherapy would add a new and efficient therapeutic agent in the treatment of what are usually very obstinate cases.

Its more general employment by the general practitioner would lessen the number of patients who now tire of the consumption of drugs from which no benefit is derived or from which only temporary relief is obtained, and who eventually find their way at the present time into the hands of quacks and charlatans of various kinds. All physicians employ suggestion to some degree, but there is room for its employment to a much greater extent and in a wider field with benefit to rational medicine, to physicians and to their patients.

The manner in which psychotherapy acts offers an interesting problem. The role which the nervous system plays in the function and nutrition of every structure of the body is well known. It is prob-



able that every tissue has a nerve supply which dominates its nutrition. We know this to be true of many structures, and with others it is a logical and legitimate conclusion. Mental conditions undoubtedly have great influence on the nerve supply and mental conditions can be changed by psychotherapy. It is in the vital functions of circulation, digestion and secretion, that we, in our elementary knowledge of psychotherapy, consider it of greatest importance. We have long noted the effect of the mind on bodily functions in health. The flushing or paling of the face by an emotion, the results of fear, a powerful thought which may even cause death, and the effect of emotion on the perspiratory glands, the digestive apparatus, the secretion of milk, etc.

Darwin has spoken of the effects of grief. He found circulation contracted and feeble and the tone gone out of the muscles and organs.

In homesickness we find similar conditions and physicians realize the inadequacy of treatment. If thoughts can so modify the impulses going out to the various organs, may not direct messages from the will, given with definite instruction, do as much, or more?

From Dr. L. Menard, an eminent French physician, in an article on "Some Methods of Psychotherapy" we quote as follows:

The influence of thought on the organism is easy to prove. . . . The concentration of the mind on a point, or the lively excitation of passions or imagination, have the power to modify the organic functions. Emotion and imagination are able to modify the secretions, as is shown by the fact that the mouth becomes dry and hot in fear or anger, while the thought of savory food makes it moist. . . . A violent emotion may thus so greatly change the secretion of gastric juice as to cause indigestion in persons predisposed to it. The popular expression 'green with anger' refers to an attack of jaundice caused by an accumulation of bile in the blood due to passion; in such a case, nervous excitement hinders the normal working of the liver. . . . .

"Numerous cases may be cited where remedies have acted according to the belief of the patient in their special effect and sometimes in a way opposed to their ordinary properties. . . . Still, we must not exaggerate the bearing of these exceptional facts and think that by exerting influence over the imagination of patients, or even by using hypnotism, we can always purge them with opium and put them to sleep with emetics."

Psychotherapy, Dr. Menard goes on to tell us, avails itself of these facts in a variety of ways. It may cure by emotion, as when a girl who had lost the use of her voice for years regained it in the fright of seeing a friend in the path of an oncoming train. Or it may act by persuasion, as when the physician succeeds in arguing a patient out of the idea that he is unable to talk or to walk. Again, it may have recourse to distraction, as Pascal did when he cured a toothache by applying himself to a difficult mathematical problem. Or it may employ, perhaps through long years, processes of education and training. All these are methods of treatment by psychotherapy or scientific mind-cure.

"In the various cases of cure through the psychism by means of emotion, distraction, or persuasion, a powerful thought weakens or banishes from the field of consciousness, sometimes by substitution of

itself, the parasitic idea that has brought about the malady or hindered its cure.

"When the emotion, persuasion, or distraction causes a morbid manifestation to disappear, either permanently or momentarily, when the efforts of conscious and free will, directed toward this end, with or without the aid of an adviser or trainer, relieve a patient of an infirmity or a hurtful tendency, there is an action of the thought on some of the organic functions, and on physiologic or morbid tendencies, but there is not, properly speaking, 'suggestion' in the restricted sense that this word should have. In this sense it should be applied only to action exerted on the inferior psychism or the subconsciousness dissociated from the superior center in the state of hypnosis or sleep. Hypnotic suggestion aids us in penetrating the mechanism of psychotherapy, but it does not, in itself alone, constitute the whole of psychic therapeutics, and it would be wrong to try to bring this about."—

In the light of our present knowledge it is impossible to state with accuracy the definite limitations of the effect of the mind. Neither do we know the *exact* influence of any drug upon the elements of any organ, nor the exact action. Yet we know enough of the effect and actions of remedies to make some practical use of them. So with the power of the mind over the functions and conditions of the body. The deeper one studies into the subject and the closer one observes the relation of mind and body, the stronger grows our faith in its power to heal. But it behooves us to be scientific, proving the way.

Human progress has always been made by reason of judgment, carefully selecting the truth from the dross. No branch of science has ever evolved in any other way. As an aid to medical science, psychotherapy may be of inestimable service and no line of investigation, perhaps, at the present time, would better repay the progressive physician than a scientific, unprejudiced inquiry into the facts and phenomena of mental healing.

We must keep on investigating and searching after truth, always maintaining a scientific skepticism and philosophic doubt.

#### DISCUSSION.

Dr. C. A. Mitchell, Blythedale: This is a subject in which I take great interest. After all, is there very much in life save suggestion? Is it not true that "as a man thinketh so is he?" Is it not after all the fact that it is a successful physician prescribing his nostrum, and the faith of the patient and of the patient's friends that is of the greatest help? Is not mental suggestion one of our great fields of success? We know how readily the secretions dry up under mental stress. In auto-suggestion lies our greatest help or hindrance. We know nothing save what is taught us, the suggestions, the ideas of our teachers are stamped on these brain cells, and these are what we use. If we would more carefully consider psychotherapy and use it intelligently we would have greater results. We find the faith cures everywhere.



There arose a school a few years ago for the giving of absent treatment and in many cases they got results in functional diseases.

Dr. John Punton, Kansas City: I listened to Dr. Wilson's paper with much interest and after an experience of twenty-five years I am compelled to endorse all that she has said in reference to suggestion. The science of medicine comprehends everything that pertains to the knowledge and cure of disease and long since I gave up the idea that all disease succumbs to medicine and surgery. There is much more in suggestion judiciously applied than there is in drugs or surgery. I have seen the power of suggestion and the results of influence of mind on mind have astonished me. We see the power of suggestion every day. A leading obstetrician told me only a few days ago that when called to a case where the pain was extreme he practiced suggestion by using a few drops of chloroform on a handkerchief. We know that the few drops of chloroform could not produce any result. Anything that pertains to the knowledge and cure of disease is scientific medicine and the man who discards the use of suggestion today is not doing his best for his patients. It has been so long associated with quackery that we hesitate to give it a trial, but it is well worthy such trial.

Dr. J. T. Rigdon: Taking a disease where there is a real bacteriological infection, such as lobar pneumonia or cancer, can the leader of this discussion or the essayist effect a cure with hypnotic influence or suggestion, with bread pills, or with any other remedy such as is known to experimentation? Such diseases as are treated successfully by this method I would question as being disease at all. In those imaginary conditions of the nervous system where there is no pathological change, there may be benefit derived from this treatment, whether you call it deceit or fraud or suggestion. But if there is any real pathological condition can you make the patient think there is none and cure him by this method? I don't think suggestion plays any part in this process. It takes such remedies as quinine, mercury, or some other chemical agent to produce action in the tissues to repair damage done. Such conditions as imaginary nervous troubles (and there are many) are easily cured by suggestion. Yet the kindly assurance of the regular physician can through honest methods convince the patient that there is no real disease, and it is his duty to go on with his regular life. On the other hand I contend that if there is any real disease, all the suggestion, or bread pills you can administer will not prove effective. In my opinion the cases referred to in the essayist's quotations from scripture do not come under the head of the subject. Those were simply manifestations of divine power, which I hope neither the essayist nor the leader of this discussion claim to possess. The days of miracles passed away with the death of Christ and his holy apostles years ago. I am opposed to foisting upon the noble profession of medicine,



which is based upon chemical action and reaction, any method or theory that does not so depend and call it therapy.

Dr. Punton: Does the doctor consider hysteria an imaginary disease, and if he does, what is his idea of the pathology of it?

Dr. Rigdon: There may be some light forms in which there is no pathological change, in others, advanced cases, the brain or nervous system may be really affected. I do not know that I am prepared to discuss the pathology of the condition known as hysteria, but I contend that where there is any real pathological change in the substance of the brain or any of the parts affected, your bread pills and suggestion alike will fail to effect a cure.

Dr. Wilson, in closing: I did not expect this body to agree with me. I have not offered psychotherapy as a remedy for organic disease; I spoke of it in reference to functional disease of the nervous system but I did say that in *all cases* it has its influence.

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### BRONCHO-PNEUMONIA.\*

BY T. O. DAVIS, M. D., MATTLAND, MO.

By the term broncho-pneumonia I mean that pathological condition that in former times was called catarrhal pneumonia, lobular pneumonia, and capillary bronchitis. I like the term broncho-pneumonia, first, because it most nearly describes the condition, as we always have present the essential bronchitis, and the pneumonic process; and, second, because we can secure better attention to our patients by the nursing laity if we name the trouble pneumonia for that term always attracts attention in any one who is close enough an observer to do any non-professional nursing, and that is the kind of nursing we in rural districts must largely depend on.

The disease is most commonly met in the extremes of life, that is in the very young and the aged. Among children about 25 per cent. of the cases are primary, and about 75 per cent. secondary to some of the diseases common to childhood, viz., measles, pertussis, diphtheria, scarlet fever, influenza and chicken pox. It will be noticed that these are diseases in which bronchitis is usually present, or in which the upper air passages are specially involved in the morbid process.

In older children and adults this disease may occur as a complication of any long continued severe illness, more particularly in those conditions in which the mucous membrane of the mouth and pharynx becomes foul and the laryngeal reflexes are less active than normal.

The predisposing causes in primary cases are old age and infancy,

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\*Read at the annual meeting, Jefferson City, May 1906.

bad hygienic surroundings, impure air of the over-crowded, poorly ventilated rooms, bad feeding, and in fact any or all of those conditions of life where normal nutrition is interfered with. In these conditions the microorganisms which are nearly always present in healthy air passages, find suitable soil for their rapid growth and development.

This disease is most frequent in winter months partly because the primary diseases of which this is a complication are more prevalent at that time and also because of exposure to cold and wet occurs at that season, and this I think is the most frequent exciting cause. In deglutition pneumonia the exciting cause is at once manifest and should not be mistaken if a correct and complete history of the case can be obtained.

The development of broncho-pneumonia in old people is favored by diminished powers of resistance and in both the old and the young by the less perfect expectoration. It is well to encourage expectoration to diminish this cause. The microorganisms most frequently found are the diplococcus pneumoniae, streptococcus, staphylococcus aureus and albus, Friedlander's bacillus, Loeffler's bacillus, and the colon bacillus. The most frequent in the primary cases is the diplococcus pneumoniae and, according to Hale, in about half the cases is found alone. When not alone it is most frequently found with the streptococcus and much less frequently with the staphylococcus and the other organisms mentioned above. Occasionally the streptococcus is found alone.

In secondary cases it is the rule to find a mixed infection. The diplococcus pneumoniae is found in about 75 per cent. of the cases but it seems less potent in giving character to the disease than the streptococcus. Although generally speaking the streptococcus plays the most important part in broncho-pneumonia complicating measles, it is in this form that the diplococcus pneumoniae is more often found in pure culture than in other secondary cases.

It is not at all uncommon to mistake an acute tuberculosis for a broncho-pneumonia and before the error is discovered serious results may follow.

Especially is this true when the diplococcus pneumoniae is present in sufficient numbers to give character to the disease. While in lobar pneumonia in the great majority of cases only one lobe is involved, yet in the bronchial or lobular form the rule is that both lungs and lobules in all the lobes are involved and the lesions found side by side and in all the lobes or only one lobe as the case may be, are essentially those of bronchitis and of pneumonia. The lesions may be central and so marked that only by a very careful examination, and frequently several examinations, may they be discovered, as in those cases where the lesions are central there may be scarcely no involvement of pleura of either the parietal or pulmonary wall, and only by the clinical history can the diagnosis be cleared up.

The symptoms may be very obscure and even misleading making it almost impossible for several days to clear up the diagnosis. In the primary cases as in the acute bronchitis, the early symptoms are, loss of appetite, a general malaise, slight rise of temperature, increased respiration and pulse and cough either dry or with a mucous expectoration in those able to perform that important act. The invasion will vary greatly. In some it will simulate lobar pneumonia very closely being marked with chill, or possibly in children with slight or severe convulsion, and by a rapid rise in temperature to 100 or 104 F., or even higher, or the invasion may be insidious with no characteristic features, the symptoms simulating typhoid fever, or meningitis.

In those cases simulating meningitis there may be repeated convulsions, photophobia, retraction of the head with rigidity of the neck and an absence of physical signs of consolidation in any portion of the lungs.

In secondary cases the prodromal symptoms and invasion are masked by conditions attending the primary disease. The invasion is generally gradual and seldom marked by convulsion or chill.

The child becomes restless and there is disturbance of pulse, respiration ratio, with rise of temperature and increase of cough, or, if none was present before, cough develops at this time and should always be looked upon with suspicion. The cough may be dry and hacking and if there is any expectoration it is mucopurulent in character. An early symptom may be the cough which is painful, frequent and hacking, and on account of pain the child will refrain from coughing as much as possible. If the cough can be kept loose and expectoration free there is much less pain present and the patient consequently more comfortable.

The cough often persists after resolution has taken place and it is often those cases that give us the tubercular patients later if there be any exposure to tuberculosis. I have made it a point to caution patients with these after coughs to be very careful about exposure to consumptives for some months afterward for fear of tuberculosis developing.

The temperature varies according to the extent of the lesions present, the virulence of the infection the general condition of the patient and with the variety of microorganisms present. It may rise slowly or very suddenly, to 103° or 105° F., and it averages moderately high. There may be sharp elevations, generally in the afternoon but at times in the early morning. The variations in the temperature curve gradually become less and less. In the favorable cases the trend is downward the restoration to normal being generally by lysis.

In unfavorable cases the trend is gradually upward the temperature sometimes reaching 107° F., or the temperature may be constantly of a high continued type, this usually pointing to a fatal issue. On



the other hand in the greatly debilitated the temperature often does not go above 100° F. These patients usually succumb.

Pain is not a constant symptom and frequently is felt only by deep inspirations and occasions little trouble.

It may be a few days before any signs are discoverable in the chest unless by a very careful auscultation assisted by having the patient cough. In primary cases the first signs are due to the congestion and bronchitis which may be localized in one or more areas or may extend over both lungs. The results of percussion may be negative or there may be slight dullness.

On auscultation we detect feeble breathing which later has a higher pitch and is associated with fine sibilant or coarse sonorous rales in the affected area, or may be heard over a larger area than would seem involved from the percussion dullness.

Often a severe cough may clear for a time the rales from the lung which will reappear after a short time. Frequently very fine moist rales will be heard usually in the lobes behind, especially if the patient remains much of the time on the back.

The signs of consolidation vary according to the area and degree of consolidation and also according to the proximity to the chest wall. In the cases in which there is a large area of consolidation the signs simulate closely those of lobar pneumonia and it is at times very difficult to diagnose between the two. It must be made on the age history, sputum if any be present, and on the physical signs. The physical signs alone furnish positive evidence.

If with coarse rales heard throughout the chest the temperature should continue to rise for three days in succession above 103° F. broncho-pneumonia is undoubtedly present unless there be some other disease present to account for the rise in temperature.

If instead of the bronchitis being generalized the signs are located in one lung, or confined to one lung posteriorly, broncho-pneumonia may be regarded as certain. In other words localized bronchitis with temperature rise means broncho-pneumonia provided tuberculosis can be excluded. Broncho-pneumonia is always a serious disease and in infants and the aged dangerous to life.

The prognosis depends upon the age, surroundings and previous condition of the patient. In primary broncho-pneumonia there is a severe strain on the patient, and in the secondary form where the patient is much debilitated with, or from the primary disease, the prognosis is always very grave.

The prognosis must always be guarded as in my experience while a patient may apparently be getting along well, we may have a re-infection or extension to other portions of the lung in spite of the treatment, and these repeated re-infections exhaust the patient so that he finally succumbs.

The most favorable cases are those with moderate and nearly even temperature not running to extremes either way.

The terminations may be by resolution, suppuration, gangrene, chronic broncho-pneumonia, or death. The mortality in all cases is about 60 to 70 per cent.

Treatment. Prophylactic treatment is very important and care should be taken to see that children are properly clothed, that is plenty of clothing to keep the body warm under the conditions in which the child is placed, yet not over-clothed so that the clothing is burdensome. They should be allowed free exercise out of doors in all but the most inclement weather and I sometimes question if it is not best to let them go when they want to go no matter what the weather. We notice that the children of the very poor who are exposed to all kinds of weather seldom have lung troubles of any kind and if they do their hardy life enables them to combat disease much better than their more fortunate or unfortunate companions. Rooms should be well ventilated and the child should be accustomed to an even temperature when in health, if possible, and this temperature should be between 65 and 75 F. When fever is high the child will bear a lower temperature than when no fever is present.

While I believe in an even temperature yet we often meet with cases that in health are used to a high or low temperature and in these cases it is too great a change to ask that they be subjected at once to a fixed temperature of 70 degrees, but they should continue in a temperature near to which they are accustomed; if desired by the physician to make the change to 70 degrees let it be done gradually and governed largely by consulting the patient's comfort. Infants are better off by being held much in the nurses arms and frequent change of positions, to prevent if possible metastatic congestion in the lower back part of lung.

I like to begin treatment with calomel 1-10 grain one-half to one hour until six to ten doses are taken according to condition and age of child, and after the first round I frequently give 1-10 grain every four hours until secretions are aroused. Where cough is harsh I give ammonium carb. et doveri in sufficient doses every three hours to allay any nervous symptoms present and liquify sputum, or loosen the cough and thereby secure more comfort to the patient. I give this in enough sweet milk to cover taste.

I also use an expectorant mixture with glycerine as a base consisting of ipecac, squills and wild cherry. Counter irritation should be maintained by the use of some counter-irritant, namely mustard paste, tinct. iodine or capsicol, and I like to envelope the entire chest with a cotton jacket which should be worn until convalescence is well established, being careful not to interfere with respiration. The vital forces should be watched carefully and stimulants given as soon as indicated.

I think it is a mistake to give stimulants until there is a call for them as patients may acquire a tolerance for them and they must be largely increased when they are needed and because they increase heart action when not needed wearing out that organ which should be spared all extra work in this disease. They are indicated when the pulse is weak, rapid, compressible, or irregular. Whiskey or brandy is good in these conditions and we get a response from them I think quicker than anything else by the mouth. The dose is to be regulated by the condition and age of the patient the effect watched, and should be withdrawn as soon as possible. Strychnine is indicated to re-inforce alcoholic stimulants; the effect is more lasting and not so much depression follows withdrawal; it is to be preferred to follow alcoholics and thus may be continued as long as needed.

Where much congestion of the lungs exists, and consequent threatened heart failure, nitroglycerine is good as by dilating the superficial capillaries the congestion is relieved. For the respiratory stimulants which are often indicated strychnia I like best of all. Caffein may be given in 1-8 grain doses repeated hourly. These measures will tide patients over some of those cases of sudden weakness but in cases that come on gradually the effect will be only temporary and treatment of any kind is usually disappointing.

Where temperature does not rise above 102° or 103° F. very little treatment is required for fever.

Cold sponging if the child will bear it, is the best antipyretic known and I use it in preference to all others if a child will allow it, and generally it can be used if the nurse or attendant uses tact in the beginning. When child resists the cold sponging I sometimes use warm sponging which answers almost as well as cold; either relieves the hot dry skin and restlessness so often present and patient will drop into quiet sleep. Whichever bath is used it should be repeated when symptoms return.

During later stages the principal danger is from exhaustion and all depressing measures are contra-indicated. It is necessary to give careful attention to nutrition of the patient throughout the disease. After attacks of broncho-pneumonia general tonics are indicated and should be continued until lung tissue is restored to normal, I would condemn the practice of sending patients to the so-called health resorts, first, because the patient's physician understands him better than any strange physician and can direct his every day life and diet and meet any change with appropriate treatment. Second, because health resorts are crowded with incipient tubercular patients making them the best possible field for infecting one just recovering from broncho-pneumonia. Third, because many of our patients are not able financially to take those extensive and prolonged trips and if the case shows disposition to be protracted we often fear tuberculosis. Let us not



be cowardly and send patients to other fields to die among strangers and away from home but meet the conditions bravely, do all we can for the patient at home and if die he must let him die at home among friends and friends will be better satisfied than if he was sent away.

#### DISCUSSION.

Dr. Woodson Moss, Columbia: I have nothing to say but words of commendation. Broncho-pneumonia, from the very fact that it attacks the extremes of life, and follows in the track of debilitating diseases, is the very nightmare of the profession. The essayist has quoted the authorities on the etiology of the condition and yet the best of them often throw no light on the treatment. We have no specific treatment for broncho-pneumonia. It may attack any child under three years of age and it ranks next to bowel troubles in fatality. We know nothing new in regard to its bacteriology, its pathology or its symptomatology. We perhaps have advanced a little in diagnosis. The only thing it is likely to be confused with, is lobar pneumonia, and I don't know that it makes much difference whether we make the diagnosis or not for its treatment is very similar. It is just a supportive treatment right from the start. Like the doctor, I do not believe in giving stimulants too early. In the case of patients at the extremes of life, many of the remedies that we can use between these extremes are cut off from us, such as opium, for instance.

Dr. Davis, in closing: I wrote the paper largely as a call for help, hoping to get something new in the treatment of this condition.

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#### MALARIA.\*

BY T. C. ALLEN, M. D., BERNIE, MO.

The views of the medical profession on the question of malaria have undergone a radical change in the past two decades, because of a knowledge of new facts established by careful investigation and research. About the only old landmark remaining is the treatment, and that is well nigh immutable because quinine in malaria is one of the few specifics known to medicine.

Malaria is an acute, infectious disease, due to the presence in the blood, and, exactly, in the red blood corpuscles, of the plasmodium malariae, which is a true parasite, a uni-celled animal, and not a bacillus. There are four varieties: Quotidian, tertian, semi-tertian and quartan, having life cycles of 24, 48 and 72 hours, respectively, bearing a direct relation in their life cycle to the type of fever they produce. A quotidian paroxysm may be due, however, to two swarms of tertian parasites, sporulating on alternate days. Likewise a swarm of tertian

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\*Read at the annual meeting, Jefferson City, May, 1906.

and one of quartan, sporulating normally, may produce a quotidian paroxysm for two successive days and then a tertian paroxysm. So two swarms of quotidian parasites may produce two paroxysms daily. These varieties of parasite are distinct entities and not varied forms nor various stages of an identical parasite. Pernicious malaria is due to the crescent form of the semitertian parasite.

The paroxysm of typical malaria is produced by the sporulation or hatching of a new swarm of parasites, which individuals become powerless to produce another paroxysm, except by sporulating a new swarm in turn.

The parasite has two life cycles necessary to its perpetuation—asexual in man and sexual in the mosquito and, possibly, other insect hosts. We have not a perfect knowledge of this, but it is, briefly: The germinal rods in man generate ameboid bodies and the sexes become separated, the male forms being flagellating granular bodies and the female non-flagellating hyaline bodies. These forms are sterile in the human host, but in the mosquito fertilization between the sexes takes place and the motile form is born. This penetrates the tissues, usually the stomach wall, of the mosquito, becomes encysted and from it the germinal rods are developed, to begin again the cycle.

The mode of infection is by inoculation from one individual to another, the anopheles mosquito being the medium, or carrier of the infection. The period of incubation in the mosquito, from the ingestion of the parasite until its bite will infect, is eight days. In man, from inoculation to manifestation of symptoms, the period is fourteen days, with, exceptionally, great variation. The parasite loses its virulence in dry air, to regain it when returned to marsh conditions.

The role of the mosquito in transmitting the disease is now so well established and so universally accepted as to need no defense nor recitation of experiments establishing it. It is established that wherever malaria is there is the anopheles mosquito, but not necessarily the converse. The systematic extermination of the mosquito with the corresponding disappearance of malaria from very malarious districts is a case of proving the diagnosis by the treatment strongly supportive of this contention.

The question of the malarial infection of the fetus in utero is one not generally discussed, so far as I am aware. Osler is silent on the question. A careful reading of the *Journal of the A. M. A.* for the past five years has rewarded me with a report of but two cases, one by Dr. Lindsay Peters, Baltimore, June, 1902, and one by Dr. W. L. Lawrence, Yellow Pine, La. A case of my own: A lady who had suffered with a malarial cachexia almost all of the summer and fall of 1905, gave birth to a son on December 15, 1905. On December 20, this infant had a paroxysm, undoubtedly malarial. The paroxysms continued daily until December 26, when the infant died. The paroxysms

were typical malarial ones, the spleen greatly enlarged and jaundice pronounced. This was in winter, in a closed room, where no mosquito could have been, and the period of five days from birth to manifestation of symptoms, is far below the minimum of incubation.

Following a continuation of malarial paroxysms the infection establishes a malarial cachexia, or chronic malaria, showing the clinical picture of puffy, waxy, sallow skin, icterus, ascites, anasarca general or regional, tender liver, enlarged and hardened spleen, hydremia and a paucity of both red and white corpuscles. The spleen is at once the cradle and the grave of the parasite.

After repeated sporulation there seems to obtain a species of auto-immunity, the parasite becoming innocuous but accumulating in the spleen, a deep splenic injection of quinine, or, occasionally, the ingestion of large quantities of it, or sometimes some fortuitous circumstances not readily recognized, driving them into the peripheral circulation and reestablishing their activity. This is latent malaria.

The continued malarial fever is in reality not a malarial fever, but a toxic fever, due to the presence in the blood of toxins, the result of the parasite's death, or of its excrementitious products. The unfailing sign of malarial infection is periodicity, whether it be a typical paroxysm, an enteritis, an urticaria, a neuralgia or a rheumatoid attack.

The complications of malaria are legion: Asthenopia, vertigo, hematemesis, hemoptysis, neuritis, splenitis, hepatitis, herpes, urticaria, pruritis, erythema, pompholix, gangrene, all showing a distinct periodicity. Hemoglobinuria is a grave complication superinduced by the ill-advised administration of quinine to malarial subjects in whom the red corpuscles are gravely malarially diseased and degenerated.

Immunity to malarial infection is never acquired, although the negro seems to be relatively immune.

Since the anopheles mosquito is the carrier of malaria it is obvious that his extermination will practically stamp out the disease. An acquaintance with this variety is therefore important: His wing is dark and spotted, that of the culex is clear; his palpi are long, almost as long as the proboscis, that of the culex very short. When at rest his head and body are on a line but at an angle of 45 degrees to the surface on which he rests, the culex is hump-backed but the body parallel to the surface. He breeds only on partially stagnant pools of water where algæ may be obtained, being in fact a country mosquito; the culex breeds anywhere. It follows that the breeding places should be drained and filled, and the attacks of the mosquito on man in every way combatted.

Quinine is a specific because of its fluorescence, producing violet rays of light in the blood, in which the parasite cannot stream, hence preventing sporulation.



## DISCUSSION.

Dr. Herman E. Pearse, Kansas City: The bugbear of the surgeon is fever when we don't know where that fever originates, so we get into the habit of hunting for malaria very methodically. At St. Luke's hospital we make every month from forty to fifty blood examinations. A few years ago I took the position that no patient should be treated for malaria unless the organism could be found in his blood, but I have withdrawn entirely from this position. The diagnosis of acute malaria and the cure of malaria must be made without any reliance upon the microscope. You may rely upon the microscope to convince you that you are right when the patient does not respond to the quinine. I can mention several cases that are illustrative of my reason for this belief. The first was a boy of 16 years. Had fever in Arkansas but the microscope showed no plasmodia; he continued to have his chills, fevers and sweats and after he had had three attacks I gave him quinine any way, and everything stopped at once. Yet four days after the cessation of the fever, and a week after I first saw him the plasmodia were found. He reapplied for treatment three weeks ago. The malaria organism could not be found but he was put on quinine and the attacks have ceased, yet the organism has never been found in this second attack. Another case is equally interesting. The patient was one of a ship load of men for the Philippines. I went over those men to see if they were fit subjects for tropical service. I turned down two, one on account of a rash and a temperature. He had been living in Arkansas and said he had been taking 20 grains of quinine but did not know that he had a temperature of  $101^{\circ}$ , was not sick and was going about his work. He is now a well man, eats heartily, is of good flesh, has no temperature, is of good appearance, and yet a drop of blood at any time shows the plasmodia. I remember a case that occurred in the East. A sailor entered Johns Hopkins hospital with acute malaria. Blood stains were made, patient finally cured and discharged. He came back six months later with a compound fracture of the leg. An examination of the blood from the cancellous tissue of the bone of the leg was made and the plasmodia found. I believe the infection may remain latent for years and years and I do not believe that a good appetite and subjective relief is any proof whatever that the man is cured of malaria.

Dr. Charles F. Briegleb, Franklin: There is one statement I wish to consider, and that is the occurrence of malaria in winter when no mosquitoes are around. I have had this occur in my practice frequently and believing the mosquito to be the agent have asked the family to search the apartment for the mosquito. I have had the report made a number of times that the mosquito was found in midwinter, and I recall one warm afternoon during the past winter before one of the last cold snaps, while I was sitting in my office conversing with a patient

on this subject, we noticed a big mosquito on the outside of the window trying to get into comfortable quarters. I make mention of this observation to call attention to some unsuspected and over-looked sources of *acute* malarial infection out of season, in addition to, and possibly explaining some of the so-called latent forms.

Dr. Allen, in closing: My only thought in preparing this paper, was to suggest a few things to bring up a discussion. I am of the opinion that the underlying factor of malaria in other diseases is not appreciated. There should be no difficulty in diagnosing a typical case of malaria. We who practice in the swamps know that after the chills are broken a latent condition seems to be established which will manifest itself later, and such Dr. Pearse's case may have been.

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### TUBERCULAR ARTHRITIS.\*

BY J. H. TANQUARY, M. D., ST. LOUIS.

Tubercular arthritis is a tubercular inflammation involving, not only the synovial membrane of a joint but may include tendons, ligaments, cartilage, bloodvessels, nerves, or any other tissue found about the joint. It is not a very rare disease including, as we today see it, most of the chronic joint affections.

Prior to 1882, the date of the discovery of the bacillus tuberculosis, these cases were not well understood and were generally believed to be constitutional, hence treated with general remedies, mechanical and operative treatment being almost entirely neglected or perhaps not well understood.

It was formerly named scrofula, tumor albus, white swelling, morbus coxae, and by very many other terms too meaningless and numerous to consume our time in naming. Not only was the true etiology of this disease established by the discovery of the tubercular bacillus but the entire management of these cases has been revolutionized since that discovery. Besides this germ there are many other predisposing causes of this disease, occurring as it usually does at an early period of life, being most common at from three to five years of age.

It frequently follows diphtheria, scarlatina, lagrippe, typhoid fever, and many other depressing diseases that prepare a suitable soil in the system for the life and propagation of these germs.

While we now know that this disease is not inherited, at the same time we must recognize the hereditary tendency calling for strong, resisting powers on the part of children of tubercular parents; we also know that family history cannot be so perfect as to produce immunity from this disease. Children of crowded cities where sanitary conditions are bad, and where the supply of pure fresh air and proper nour-

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\*Read before the St. Louis Medical Society, April 7, 1906.

ishment are not sufficient, are likely to a considerable per cent. of them, to suffer from this disease.

It comes on as a later infection after the germs have been introduced into the respiratory or alimentary tract, or some other part of the system and carried by a bloodvessel or lymphatic to the vicinity of the joint or to the joint itself, where it always begins in children as an *ostitis*, gradually extending to the joint to become an *arthritis*, or in the adult patient may be carried by a bloodvessel or lymphatic directly to the joint, becoming an *arthritis* at once. This disease is chronic in its nature, not rapidly invading the tissues about the joint, producing pus, fever, and other symptoms of a more violent inflammation, unless accompanied by pyogenic germs, but in its characteristic, slow, cheesy mass way, finally gets there doing irreparable damage to the parts if allowed to continue uninterrupted.

The onset is not rapid. The original focus may remain dormant for a long time, or if resisting powers are sufficient may eventually be overcome, but if resistance is overcome and development continues, sooner or later there is complaint of soreness, or stiffness, increasing with motion of the affected joint, gradually developing into quite severe paroxysms of pain that become worse and may be unendurable at night. Swelling to a greater or less extent is always present above, below, and around the joint. The veins appear very large and well outlined in the swollen parts, and the skin assumes a pale glistening appearance formerly leading to the term, "white swelling." As the disease improves the swelling disappears. Above and below the swollen area, we always find (after about three or four weeks) marked atrophy of the limb, which is very common in this disease, and which not only remains while the disease is in progress, but may be found always to some extent after a severe attack.

The joint becomes fixed by muscular contraction (as a result of a reflex action) at an early period of the disease, sometimes to such an extent as to resemble an *ankylosis*.

If the limb be gently manipulated a spasmodic effort of the muscle is always present as long as the disease lasts; this is perhaps the most reliable of all the symptoms of the disease.

A low grade of fever that may extend at times to  $100^{\circ}$  or  $101^{\circ}$  F. is present in most of these cases.

Deformity is always found in the later stages of the disease, unless prevented by early and proper treatment; the limb becomes flexed and later subluxated, the synovial membrane thickened and epiphyses enlarged.

In old cases, especially those that have been neglected or complicated by the presence of the pyogenic germs, we may have suppuration, abscesses, (followed by sinuses) which are always more or less destructive to the tissues, and especially in adult patients, may mean



entire loss of joint in an ankylosed condition, or of life. But when an early diagnosis is made in a young patient and promptly followed by correct treatment good results may be expected, so far as the life of the patient is concerned, as well as a useful limb without deformity. Bad results, deformities and a death rate in the past of from fifteen to twenty-five per cent. of these cases within five years, have been due most probably to a great amount of neglect and improper treatment.

The prognosis among the adult patients is always more serious as they are not only slower in making a complete recovery, but very prone to suffer from many complications. They often suffer from abscess, resulting in ankylosis or possibly sepsis, and may require an operative procedure to save life; a large per cent. of them develop a pulmonary tuberculosis, or amyloid changes of liver or kidney finally losing their lives.

Every general physician as well as specialists on diseases of children should have the prominent early symptoms of tubercular arthritis well fixed in his mind because a correct early diagnosis followed by prompt and efficient treatment is of very great importance in these cases.

Family history is of very little value in making a diagnosis, because the disease may be found amongst the few who have a perfect family history.

The most common error is in pronouncing the disease rheumatism. This mistake should not be made because rheumatism is a polyarticular disease, while tubercular arthritis is monarticular. Acute osteomyelitis may also be mistaken for tubercular arthritis, but the acute suppurative inflammation of the shaft of the bone with a high temperature and other acute symptoms would soon show it different from tubercular arthritis.

Treatment, after an early diagnosis and in all young patients, by expectant methods, and mechanical treatment should usually be successful in from eighteen months to three years, with but little or no deformity.

While the disease is a local one in the beginning and may require no general medication, yet if needed, we should use tonics, alteratives restoratives, and narcotics, with plenty of good food and all of the fresh air and sunshine that can be utilized by the patient. The great principle of treatment is complete rest of the diseased joint, with perfect protection. Absolute rest on the back with complete fixation of the limb in a plaster cast put up in good extension for three or four weeks is the ideal early treatment.

If there is severe pain, Buck's extension may be substituted for the plaster cast, affording great relief to the patient.

By the end of the first month fever and other active symptoms

including pain, should subside. The patient should then be put on his crutches with a plaster cast, or one of the best forms of braces with which to keep up the necessary fixation and extension, and sent to live in the open air and sunshine, giving plenty of exercise to all parts of the body but the affected limb which is still kept at complete rest. This plan of treatment with plenty of good food should cure most of the young patients without deformity. But in a large majority of cases, the patients do not get proper treatment from the beginning, and consequently do not make good recoveries.

A small per cent. of young patients that have been neglected and a large per cent. of older patients that may have been properly treated terminate in abscess, followed sometimes by sinuses and frequently by mixed infection, not infrequently complicated by severe osteomyelitis and other complications, sometimes requiring operative procedure.

In the younger patients a good opening with arthrectomy, may terminate in a good recovery with a movable joint, while other cases may require an excision. With ankylosis, and sometimes in very severe cases especially among patients fifty years old or over whose systems are in a bad condition, amputation is conservative treatment.

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## SOME PHENOMENA OF TUBERCULAR INFECTION.\*

BY WILLIAM PORTER, M. D., ST LOUIS.

The study of tuberculosis is a many sided proposition. It is not my purpose to attempt a full resume or to discuss at length any of its more important features, but rather to make certain suggestions which have been the outgrowth of daily contact with victims of this most interesting and universal disease. May I be pardoned if I omit statistics, encouraging as they are, or detailed description of the methods of limitation and plans of organizations which have already been so effective? My thought tonight is to speak of some of the phenomena of tubercular infection and possibly to make a few therapeutic suggestions as legitimate deductions.

Naturally the bacillus is the central point in most of the experiments and investigations concerning tuberculosis. To some it might seem that almost two decades of study had sufficed to learn all that is to be known of this organism, yet, I believe that we are only in the beginning of our lesson and that so far as specific antagonism is concerned we await the dawn. That the dawn is near at hand there is every promise even before the final victory. In Germany in 1890 the death rate per 10,000 of population was 28.11 and in 1902 it was 19.04. In England the death rate has been reduced 50 per cent. and

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\*Read before the St. Louis Medical Society April 7, 1906.

in some of our eastern cities almost as much. A recent report shows that in less than two decades there has been in Boston a decline of 50 per cent mortality<sup>1</sup>

It is then with new courage that we study some of the characteristics of tuberculosis and though the presentations may seem disconnected there is in them as presented an interdependency that may not be ignored. A few words as to the bacillus itself. We need not more than mention the different ways of conveyance, as dust, in globules of expectorated mucous or by food or by flies as shown by Lord in the Boston Medical and Surgical of a year ago. The vitality of the bacillus has been the subject of many experiments. Twitchell<sup>2</sup> found that dried tubercular sputum in a handkerchief, woolen blanket or on wood when inoculated would produce a tubercular lesion after 70 days. Koch<sup>3</sup> dried sputum at laboratory temperature for four to eight weeks and found it would produce tuberculosis in animals. Sawinsky as quoted by Twitchell found that sputum subjected to the ordinary conditions of the floor of a dwelling house preserved its virulence for over two months. Flick (*Med. News*, February 20, 1904), says "consumption may well be termed a house disease. The house is the place where the tubercle bacillus lies dormant in wait for its new host; it is the place where the new host gets his implantation." While it is true that sunlight and air currents and heat extremes limit the life of the bacillus, yet it may be well to remember that under conditions not infrequent such longevity is possible.

A second observation is that the *number of bacilli is not indicative of the stage of progress*. At Mount St. Rose we divide our cases into three classes according to the evidence from physical examination. The three clinical stages are those usually given in the books. The divisions from the microscopical showing are these: one bacillus in a field, or only one found in several fields, is written down as in first class; several in a field as second class; an average of six places the case in the third class; from six to ten in the fourth; and a larger number, or "clump" of bacilli, places it in class five or five plus. Now it often happens that patients in the first or early stages clinically, are in class five or even in five plus from the bacteriological tests. Conversely, though this is more rare, advanced cases may show few bacilli.

It may happen that a great variation in number is found in the same patient at different times, without any physical evidence of change. Hence, I am of the present opinion that while as a diagnostic

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<sup>1</sup>(Report of the committee Drs. Jackson, Otis, and Locke, appointed by the Suffolk District Medical Society to investigate the progress of the crusade against tuberculosis in the city of Boston, October, 1905).

<sup>2</sup>(Report first annual meeting National Association for Study and Prevention of Tuberculosis).

<sup>3</sup>(Bacteriology, Sternberg).



evidence the bacillus tuberculosis is valuable, it does not aid in determining the stage or location of infection, or the prognosis as to time and result. In a recent report, by Drs. Ravenel and Irwin, 3 sterile cases were found among 30 in which no bacteria in lung cavities were shown. The absence of bacilli in the early or closed stage will be referred to in speaking of early signs.

*The routes of invasion* are worthy continued investigation. At present the respiratory tract is by many considered the main channel, but with a larger opportunity for investigation than formerly I am convinced that many more pulmonary cases are directly infected through the lymphatic and blood channels than are recognized by the average physician. The phenomena of invasion by the bronchial route have been studied not only clinically but in their pathological sequence and to such an extent has this study served that it has until recently over-shadowed the other scarcely less important questions of infection along the lymph channels or around the arterioles and capillaries by the blood current.

Without dwelling on the bronchogenic development along the respiratory tract—which we all to some extent have followed, I would emphasize the value of infection through the lymph channels as a factor in the etiology of tuberculosis. Here again we find three methods by which the bacilli find their way into the lymphatics. First it is asserted by Behring who quotes Roemer that albuminous bodies may pass through the walls of the alimentary canal and into the blood and lymph unchanged in newly born animals but not in adults. Behring fed anthrax bacilli to adult guinea pigs and these passed through the alimentary tract without doing harm while eight day old guinea pigs similarly treated died quickly. Attenuated bacilli fed to young pigs were found in the blood. Ribbet (*Deut. Med. Woch.*, April 24, 1902) believes that most cases of pulmonary tuberculosis are heme-togenous that the bacilli pass through the pulmonary tissue into the lymph channels and to the bronchial lymph. From this point they are carried by the blood stream to the lungs, usually to an apex because of comparative local anemia and a retarded lymph flow which is due to hindered movement into the ossification of the first rib.

A most important recent contribution to the study of lymphatic infection is a paper presented to the Section on Laryngology at the fifty-fifth annual session of the American Medical Association by Dr. Edward B. Wood. After recording the results of his most interesting experiments made in the laboratory of the Pennsylvania Live Stock Sanitary Board and citing many authorities he concludes that "The tonsillar tissue of the throat, because of its peculiar anatomic construction and its topographical relations, is more liable to become infected by tuberculosis than any other part of the upper respiratory tract. In nearly all cases of advanced pulmonary phthisis the faucial

tonsils become inoculated. In about 5 per cent. of hypertrophied pharyngeal tonsils some form of primary tuberculosis will be found. Primary infection of the faucial tonsil is a rarer condition.

Tuberculous adenitis in the cervical lymphatics develops in the majority of cases from infection originating sometimes in the faucial tonsils, but more frequently in the pharyngeal tonsils. The tubercle bacillus is probably unable to pass through the tonsil without having first overcome the vital resistance of the tonsillar tissue.

The danger of systemic or pulmonic infection resulting from a tuberculous lesion in the tonsillar tissues of the throat is about equal to that of tuberculosis of the cervical lymphatics. The lesion to be expected as a resultant infection from the broken down glands of the neck is a miliary tuberculosis of the lungs. Further than this possibility, tuberculosis of the lymph glands of the neck is more dangerous than a localized tuberculous lesion in any other portion of the lymphatic system.

As illustrating this proposition I may briefly cite a case in our observation ward at Mount St. Rose. A woman of 40 has had for many months prior to admission tubercular infiltration of cervical glands of right side. Bacilli were found in the broken down structures, but consultation with several surgeons determined non-interference, because of the extent of the infiltration and tissues involved. At first there was neither physical nor microscopical evidence of tuberculosis involving the lung, though we made repeated and frequent examinations. Recently well marked signs have appeared at the apex although the lung is evidently as yet in the "closed stage," and no bacilli found in the sputum. I have little doubt but that they will be found.

The tonsils are more resistant to the action of bacterial toxins than ordinary lymphoid tissue. This latter proposition is also well set forth by Dr. Jonathan Wright, (*Medical News*, March 4, 1905) and its soundness will be the more readily admitted after reading Dr. Theobald Smith's essay, *Some Problems in the Life History of Pathogenic Organisms* (*Science*, December 16, 1904).

*Auto-infection.*—This topic deserves more extended notice. I believe it to be one of the most important chapters in the study of the symptoms and care of tuberculosis. Let me briefly call to mind that constipation (with inter-current diarrhoea) is found in most cases of pulmonary tuberculosis. It has been shown that bacilli in the sputum may safely pass the impaired gastric secretions, travel the course of the small intestine, and be found in the fecal accumulation in the colon and rectum, or may pass into the deeper structures or lymph or blood channels through an uninjured mucosa. It is not a far cry to the conclusion that reabsorption of bacilli with the products of fermentation and decay from the intestinal tract is a potent addition to

the primary infection, especially in children as before quoted from Behring and I am inclined to believe that the statement holds good with those of more mature age. That this is more than a hypothesis can, I believe be demonstrated. There is here a therapeutic suggestion which we try to make practical. In appropriate cases a high enema containing a small quantity of glycerin is given daily for a week. By that time the lower bowel is probably emptied of all scybalous masses. After that, the normal salt solution is used in quantities which can be retained. The exact form of treatment may vary, but the principle is kept in mind. The reduction of temperatures and, in many cases the improvement in assimilation following this part of the treatment certainly suggest cause and effect. The premises may be wrong but the conclusion is encouraging. The fact that other bacteria are factors in temperature increase in tuberculosis does not alter the deduction as to the value of the method.

*Large doses of creasote are not indicated.*—Following the adoption of the suggestion last mentioned, we have been willing to lessen greatly the amount of creasote and its substitutes. In fact, except with the idea of improvement of digestion and nutrition (and I confess my want of faith in this) the use of this class of remedies is almost forgotten in our treatment at Mount St. Rose where we have had over 800 cases of tuberculosis in three and one-third years. Certainly, large doses of creasote, guaiacol, and their carbonates, are not given. Here again I may be at variance with many of our best observers, but I predict that in another decade, very little if any of this class of remedies will be used internally in the treatment of tuberculous cases.

*Early Sign of Infection.*—One of the most valuable reports of the past twelve months is "The Report of the Committee on Early Diagnosis of Tuberculosis to the National Association for the Study and Prevention of Tuberculosis." This is a topic in itself and time will permit me to mention only a few points. The Committee lays great stress on symptoms and signs indicating a tuberculous infection during the closed stage: i. e. before caseification and breaking down of a tubercle and the appearance of bacilli in the sputum. The symptoms are early typical repeated though possibly slight hemorrhage, increased afternoon temperature and a hacking cough are suggestive but not positive proof.

*More important are the early physical signs.*—Among these are a retardation in the movements over the affected lung portion and a diminution of the excursions of the diaphragm of the infected side shown by Litten's shadow. The use of the blue pencil to mark border line of dulness and points of asymmetry is strongly urged with exceeding care in percussion and the investigation with the stethoscope. The very earliest auscultatory sound is a rough and slightly diminished respiratory murmur not to be confounded with the sharp puerile murmur of



increased function. The respiratory sound loses its smooth quality and (Sahli) becomes impure and roughened. This change is produced by slight inflammatory changes in the bronchioli the air passing over an uneven surface and slightly narrowed. It precedes the crepitant rale and all other physical signs.

Of tuberculin, the x ray, and the use of iodine salts to increase catarrhal symptoms, the committee says their value has not been demonstrated and a case will rarely be found in which they would add considerably to the information gained through other sources.

*Posterior Lesions Are Most Aggressive.*—Diminution of the percussion note, with harsh breathing and crepitation heard in the upper interscapular region, is suggestive of lymphatic infection and infiltration of the bronchial glands. The cases we have noted of this class run a much more rapid course than those in which the infection has been through the respiratory tract. It is true the premise is hard to prove, but the fact remains that our cases most difficult to control have been those in which the physical evidence was most marked in the upper dorsal region. I would again urge that no chest examination is complete without most careful interrogation of this region.

*Extent of local lesion is not always a criterion of the general condition in pulmonary tuberculosis.*—This may be truthfully said of many diseases, but it is emphatically true, I believe, in pulmonary tuberculosis. We find it so in lobar pneumonia, which is also a specific disease. It is true, likewise, in many conditions of pus poisoning and local infection. It is, therefore, no new proposition, but one that has not been given its full value in formulating our diagnosis and prognosis in this disease. An advanced pathologic state is not incompatible with fairly good general conditions. Such cases in spite of extensive tissue disintegration, may become chronic, the advance be checked, and the patient live out his expectancy.

A word as to *the relation of pleurisy to tubercular pulmonary infection.*—Where so many of recognized authority are at variance no one man has a right to speak dogmatically. Nothnagel says that "Tuberculosis of the pleura is almost exceptionally secondary and is most frequently associated with tuberculosis of the lungs or bronchial glands. Von Ruck (*New York Med. Jour.*, September 30, 1905) deducts from forty writers and his own experience as follows: 1.—The pleural cavities are readily accessible to bacterial invasion. 2.—The great majority of pleurisies with effusion which occur in otherwise healthy individuals are due to infection of tubercle bacillus. This is proved by autopsy findings, by methods of exact diagnosis, and by the subsequent clinical histories of the majority of persons who have been the subjects of such attacks. 3.—There is ample evidence to indicate that the so-called idiopathic, dry pleurisies are likewise usually tuberculous. 4.—The subjective symptoms of inflammation of the pleural apices of-

ten simulate those of myalgia or rheumatism. 5.—In every case of pleurisy, or of persistent pain in the chest or shoulder, which cannot be satisfactorily ascribed to other causes, tuberculosis should be suspected and a careful physical examination should be instituted to determine, if possible, the existence of a tuberculous process in the lungs, or elsewhere. 6.—Even if physical examination in such cases proves negative, the patient should be regarded as tuberculous until the contrary is proved, and should at least be kept under prolonged observation and reexamined from time to time. 7.—The application of these principles will often lead to an earlier recognition of tuberculous disease of the lungs, especially, and to the institution of treatment at a period which will in many cases secure to the patient most important advantages in his prospects for recovery.

In the face of such evidence it would be foolishness to raise a feeble negative. I know that I have seen cases of pleurisy with effusions that were not tubercular and that never became tubercular, but they may have been exceptions. With our present knowledge I should hesitate to say that the majority of cases of pleurisy become tubercular and Bowditch, Hanford, Barr, Fiedler and others place the proportion as no greater than one-third. If, however, to this one-third we add the number of cases complicating old tubercular lesions it will make a high percentage indeed for the majority of tubercular cases have pleuritic extension and infection.

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#### DISCUSSION.

Dr. D. S. Booth:—I would like to know the reliability of the tuberculin test.

Dr. L. H. Behrens:—I do not believe the tubercle bacillus in itself is fever producing of consequence. In a case I have seen during the past four years there has been very little afternoon temperature although as many as 200 bacilli have been found in each field. In another case showing every evidence of pulmonary tuberculosis very few tubercle bacilli have been found. In another case all the symptoms pointed to typhoid except the Widal test which was negative. A few days before the patient died an oculist discovered the tubercle on the retina yet at no time could the bacillus be found in the scanty sputum.

Phthisis pulmonalis is readily diagnosticated in its later stages but the aim today is to make a diagnosis before there is any demonstration of the bacillus in the sputum for when the bacillus is present the condition is then quite far advanced. The fever attendant is usually due to one of the other many cocci that are fever producing. Pleurisy as a rule, is of tubercular origin. Often in post mortems we can demonstrate pleurisy and yet the lungs or pleural membranes may not have any tubercular nodules in or on them. There are very few post mortems in which some adhesions are not found. The early re-

cognition of phthisis pulmonalis is urgent; it is in such diagnosis that we get results from treatment. A point brought out by the essayist should be well considered, namely, that formerly we believed phthisis was contracted solely by inhalation of the bacillus, but today study is also being given to infection through the gastro-intestinal route.

Dr. J. M. Brady.—Every case of apparently primary pleurisy should be carefully scrutinized and tuberculosis suspected for a great many of these cases owe their origin to the tubercle bacillus. Especially is this the case if there is a double pleurisy or a complicating pericarditis. In cases where we have long been unable to make a positive diagnosis of tuberculosis but in which the symptoms have been such that tuberculosis was suspected, the development of an apparently primary pleurisy will make our suspicions almost positive. It is difficult to demonstrate the tubercle bacillus in the exudate removed with the needle. The production of the disease in the guinea pig will not be successful unless a large amount of the fluid is injected the bacilli being so few. Of great value in establishing a diagnosis, as pointed out by certain German and French writers, is the presence of a large number of lymphocytes, while the predominance of the polymorphonuclear leucocyte would indicate some other condition.

Dr. Porter, in closing.—Dr. Tanquary has given us a resume of some special conditions that are very interesting. The tuberculin test is thought by some to be valuable but for five years I have not used it. Where there is any doubt it is better to remain in doubt caring for the patient in the meantime, than to imperil the patient's future by stirring up a latent tuberculosis. I would again emphasize the importance of knowing something about the closed stage and sterile cases. Before there has been ulceration or the throwing out of tubercle bacilli, there are certain significant signs of early infection. One is the roughened, localized bronchial sounds in the bronchioles with afternoon fever and a depression of temperature in the early morning. How many of us examine the patient posteriorly in testing for tuberculosis? Is it not true that we often fail in the test where we find the most important lesions? In two out of six examined today the lesions were only to be located posteriorly. As to weight, where you find gastric distension, vaso-motor disturbances, irregular heart action, etc., you will have loss of weight, but often you will find that the patient will increase in weight. I would rather see a patient gaining in heart rhythm and in general tonicity than in weight. I have had patients who were fifteen pounds heavier when they died than when they were admitted to the hospital.



## SPINA BIFIDA.\*

BY JOHN D. SEBA, M. D., BLAND, MO.

Spina bifida, as we understand it, is a congenital condition in which any part of the bony structure of the spinal column is absent, which allows the meninges to bulge and become distended with cerebral fluid; this is generally found in the lumbar and dorsal regions but the cervical, sacral, and coccygeal regions are by no means exempt.

Owing to the rarity of this condition and to the fact that not very many post mortems are held on very young cadavers, no cases of anterior spina bifida are on record; but that they cannot occur, or have never occurred, must not be asserted, and I believe that with a more diligent inquiry into the cause of death, such cases will be recorded.

Etiology.—The etiology of spina bifida is as yet not well known. It has been suggested that it is similar to, if not identical with hare lip and cleft palate; hereditary and maternal impressions have been mentioned as possible factors in the causation of spina bifida. Although I am a believer in hereditary tendency of certain conditions, and also believe in the theory that the mother may favorably or unfavorably, through the nervous system, impress her offspring, nevertheless I am unwilling to believe that hereditary or maternal impressions play any part in the cause of spina bifida. The study of embryology and biology, from a rational standpoint, have thrown much light on subjects previously not well understood, especially in congenital conditions such as that of spina bifida. Yet with all the knowledge at our hand, we very often cannot place the etiology at a point where we can say we know it all; much is yet to be learned on this subject, and it will probably be many years before a generally accepted theory will prevail. When finally this question shall be settled permanently we will probably find it due to misplacement of embryonic cells. This may be caused by intrauterine trauma, or an excessive amount of cerebro-spinal fluid such as we often find in hydrocephalous; that such an excessive amount of fluid should press the young bony structure apart and thus cause nonunion between these parts is easily imaginable. On the other hand an intrauterine trauma, such as the bending or twisting of the vertebral column of the embryo, may cause the same condition by pressing the vertebral lamellae apart and thus also cause nonunion. That this is also a misplacement of embryonic, or cellular tissue is self-evident, but we must remember that there must also be a cause for the misplacement of these new forming tissues, and that this cause is not simply nature's fault but due to perversions not yet well understood.

*Diagnosis.*—It really would seem that the diagnosis of spina

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\*Read before the Missouri State Medical Association, Jefferson City, May 1906.

bifida would not be difficult, and as a rule physicians who have seen one or more cases, seldom err in diagnosis, but doctors who do not attend medical societies, or are averse to associate with other doctors very frequently fail to diagnosticate correctly when they meet with a case of spina bifida in their practice. I have seen cases of spina bifida that were not recognized as such, although examined by men who had practiced from ten to fifteen years. Others have mistaken spina bifida for hygroma, or teratoma.

A spina bifida is situated directly over (or in anterior spina bifida, if such should ever be recorded, directly under) the spine and is a soft tumor, composed of skin, meninges and cerebro-spinal fluid. The spinal cord, although it lies within the tumor proper, should not be considered any part of the tumor. As proof that the tumor contains cerebral fluid pressure will cause a bulging of the fontanelles. The size of the tumor is to a great extent, an indication of the extent of the bony lesion; a small tumor would as a rule indicate only a small opening in the vertebral column, whereas a large one would indicate a larger lesion. As usually found they vary in size from a quail's egg to a goose's egg, but may be many times larger. Sometimes we find that one or more of the vertebrae are absent, and then we will find that the tumor is very large. If such a condition is present in the cervical, dorsal, or lumbar region, the patient will in all probability show signs of paralysis below the tumor; but if in the coccygeal region, there will be no paralysis perceptible. When such extensive lesions are present above the lumbar region the life of the patient will be terminated in a short time, but if present in the coccygeal region, and the patient receives the proper surgical treatment, then we may expect good results.

*Treatment.*—The treatment of spina bifida heretofore has been surgical and non-surgical. The non-surgical consisted mostly of the expectant treatment in which various appliances have been devised to support the tumor; this was generally in the shape of a truss, to keep the protruding hernia in its place. That much harm has been done by such contrivances, there is no doubt in my mind. Ill fitting pads as generally constructed for this purpose do more harm than good. They have a tendency to prematurely rupture the skin, evacuate the cerebral fluid contained therein and cause consequent infection of the meninges and death. The best temporary dressing that can be applied is absorbent cotton, or plain sterile gauze. It is a fact that very small spina bifidas do get well under the expectant plan of treatment the bony aperture gradually closes, the skin curragating in folds resembling to some extent the convolutions of the brain. These are afterwards called teratomas, or skin tumors.

Another method of treatment is the injection method. Irritating substances, generally iodine, are injected into the tumor to set up inflammation and adhesion, and thus cause obliteration of the sack.

This no doubt originated from the custom, largely prevailing with some physicians, to treat hydrocele by the injection method. There is, however, a vast difference between a hydrocele of the tunica vaginalis and a meningocele of the spinal cord. A few cures are reported from this method of treatment. In my opinion these cases would have gotten well if the expectant treatment (letting it alone and let nature take its course) had been chosen. Personally I cannot endorse or sanction the injection of so strong an irritant substance as iodine into the meninges of the spinal cord. The only method of treatment must be either the expectant, or the radical surgical procedure. Surgical intervention at an early date, or better still, immediately after birth, promises the best results. It must be admitted that heretofore surgical interference has not been very successful. Some cases have been operated on which were almost hopeless from the beginning, wherein there were extensive lesions of the vertebræ and cord, with paralysis below the lesion. Such cases had just as well be left to nature. Other cases have proved fatal because the operation had been delayed too long. The literature on the subject as a rule advocates that we should wait until the child is two or three months old. This is in my opinion not very good advice. Those of us who have had experience in the amputation of superfluous fingers and toes, immediately after birth, know how well these little patients stand the operation; this is much easier done immediately than a few months afterwards. Another reason why we should insist on immediate operation is that at the time of birth, there is but little attachment between parent and child. Parental love being much stronger when the child is a few months old than at the time of birth, parents will consent to an operation immediately after birth more readily than they would two months later. Furthermore the nervous system is not as well developed at birth as it is a few months afterwards, hence the shock to the nervous system is not as great from an immediate as from a delayed operation, nor is the operation as extensive as it will be afterwards. Spina bifida is a condition that grows as the child grows; we have nothing to gain by delay but have a great many things to lose.

*Technique.*—Faulty technique in the surgical procedure of spina bifida is also the cause of many failures. Heretofore surgeons have mostly tried to be too particular in their operations and have attempted to make end to end union of the different membranes of the cord; such a procedure is entirely too tedious and takes up too much time, and even if successful would have been better not done, as it fails to serve the purpose that was intended, i. e., keeping back the spinal fluid. Rapidity is an element that should be much desired and a spina bifida operation need not occupy more than a few minutes. The tumor is split open parallel with the spine, letting out the fluid, the edges are now held up away from the spine and all superfluous tissue is cut away.



The wound is closed with a continuous catgut suture overlapping the edges of the wound, a good deal after the fashion that a miller sews up a flour sack. Then the wound is painted over with flexible collodion, or some other substance that hermetically seals the wound, and at the same time restrains the leakage of the spinal fluid. As a rule little trouble will be experienced; union by first intention will be the rule provided surgical cleanliness has been observed. Small spina bifida can be operated on by local anesthesia, provided the operation is not delayed beyond a few hours after birth, but even if local anesthesia is not practical, a general anesthesia, is well borne by infants a few hours old.



Fig. No. 1.

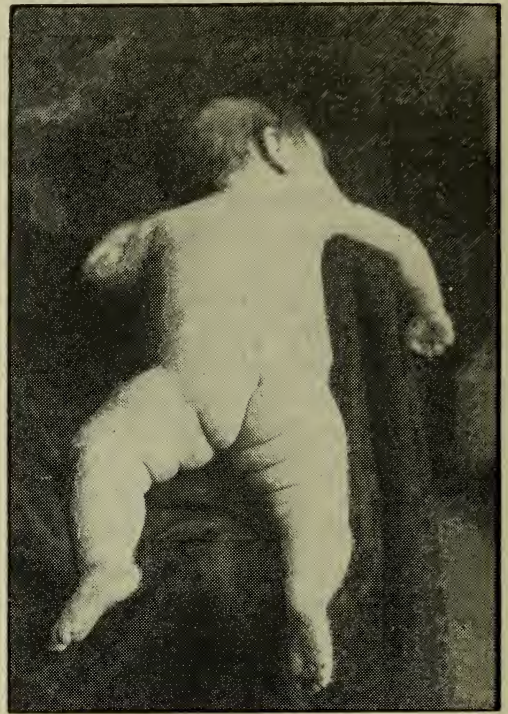


Fig. No. 2.

*Report of cases.*—In connection with this paper I beg to report the following cases: Mrs. E. P., a primipara, gave birth to a female child, June 10, 1905. Labor was normal in every respect. Over the lower part of the spine, sacrum and coccyx, there was a very large tumor, larger than the child's head, which ruptured as the hips of the child passed through the vagina. Upon examination I found that the coccyx and part of the sacrum were absent, and that the tumor had its origin in the spine. At the point of rupture there was the glistening membrane so characteristic of spina bifida. As the sack was already ruptured no pressure could be made, to prove the connection between the contents of the tumor and the fontanelles. Fig. No. 1 is a photo-



graph of this child taken an hour after it was born. I am sorry to say that a back view taken of this child was spoiled and cannot be reproduced here; this back view showed the case to much more advantage.

The child was taken to my office, when about three hours old, and under chloroform the tumor was split wide open, all superfluous tissue cut away, the edges held together, and united them with an overlapping catgut suture. The wound was painted over with flexible colloidion, thus hermetically sealing the wound. Shock was counteracted just as you would in older patients. Although this wound was near the anal orifice, there was no infection and we got union by first intention.

Fig. No. 2, is a picture of this child taken several months later



Fig. No. 3.



Fig. No. 4.

and shows a fat, plump and healthy child. By close inspection of the picture, the scar may be seen on the back.

My friend Dr. R. L. Johnson, of Rolla, Mo., had a similar case. Two views; front and side, of this unfortunate child are presented here (Figs. 3 and 4). This child did not receive any surgical treatment and died when about two years old. One can readily see the similarity of these cases by looking at the pictures.

Case No. 3. Miss E. H., about 12 years old, was born near Washington, Mo. Had a tumor on the lower spine, sacrum and coccyx, filled with fluid. The child was taken to several doctors, none however venturing a diagnosis. All refused to operate. The sack or tu-

mor gradually drained itself, became atrophied, and folds and nodules appeared, to some extent resembling the convolutions of the brain. I have examined this case several times, and as the tumor is considerably in the way, I will in all probability operate in the near future.

Dr. Paul Y. Tupper, of St. Louis, reported a case in the September issue of the *Interstate Medical Journal*, 1905, with two illustrations. Inasmuch as these illustrations represent almost an exact image of my case, of which I have so far been unable to get a photograph, I have taken the liberty of reproducing them here (Figs. 5 and 6). You will notice that the picture is suggestive of cerebral origin. In Dr. Tupper's case the coccyx and part of the sacrum also were absent.



Fig. No. 5.

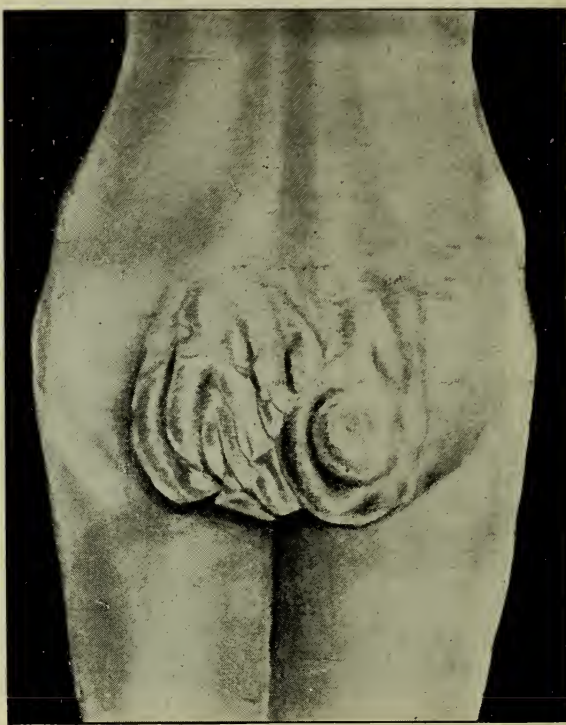


Fig. No. 6.

Dr. Tupper believed his case was not of spinal origin but thought it originated from the colon, and called it "enterocyst". The cases are not reproduced here, with a view of disagreeing with Dr. Tupper's diagnosis. I believe however that the x-ray would cast much light on the subject in arriving at a correct understanding of the exact pathological condition.

If by reading this paper others may be induced to make a deeper study of this to me interesting condition, then I shall have been amply repaid for the time and labor spent on its preparation.



## DISCUSSION.

Dr. T. C. Boulware, Butler: Spina bifida, as I understand it is a congenital deformity, consisting of a space or gap in the posterior portion of the spinal column. Through this space or gap, the membranes of the cord protrude and form a tumor. This is called spina bifida. If you will press upon the tumor it will disappear, but immediately returns upon removal of the pressure. It is laid down as among the most fatal diseases we have. The treatment has been very unsatisfactory; one author will recommend one thing, and the next will deny it, so that it is hard for us to determine what is best to do. This opening into the spinal canal is sometimes very small, and it sometimes becomes closed between the canal and the sac. You can cure this by operation. If there is a broad base to the tumor, however, the result of the operation is generally fatal. Some recommend operation, some do not. Some operate as for hernia. In surgery there are about three things that should control, first: How to operate; second, when to operate, and third, when not to operate. I think it is good surgery for us never to operate unless we feel confident we are going to benefit the patient. It seems to me that it would be dangerous to operate when the opening is broad and when the posterior portions of several of the vertebræ are missing; but when it is small, (determined by pressing upon it—and it does not go in readily—) that is one evidence that the opening is very small, and perhaps the communication between the tumor and the canal is entirely shut off. In operating, I believe the *modus operandi* is like that in cases of hernia. Most of these cases live five or six months. They generally die in convulsions. There are instances, however, where they get along up to fifteen and twenty years, but usually they have some trouble about the spine. I think that before we can hope to cure any very considerable portion of these tumors (with broad bases)—we will have to learn a good deal more about this trouble than we now know.

Dr. Scott P. Child, Kansas City: In the very earliest embryonic development it is possible that there is some injury by which certain cells are displaced and there will then be a lack of development or abnormal development. Dermoid cysts are very common along with spina bifida. I have a case in which the child is perfectly normal in every way except along about the juncture of the third and fourth lumbar vertebræ where there is a small naevus from the surface of which fine hair is growing; there is no tumor external to the surface of the skin. The child had perfect control of the extremities until about the eighth month and by the ninth month it was discovered that a complete paraplegia had developed. On examination it was discovered that upon pressing upon the naevus and moving it from side to side there was marked contraction of its center showing evidence of communication with the spinal column or deeper structure of the cord. In

these cases we nearly always find that there is a group of symptoms. In this particular case after the ninth month the paralysis partially disappeared. For a period of a week or ten days there will be scarcely any motion of the lower extremities, and then there will be some slight movement of the legs. Great tenesmus exists on defecation. My diagnosis is spina bifida occulta. Spina bifida is a condition in which operation should be resorted to. The Mayos report two operations in the last year and two cures. Chas. Mayo advises operation in every case. One important point is drainage of the spinal fluid into the subcutaneous areolar tissue by running the sutures subcutaneously. This establishes a means of equalizing pressure thus preventing the common cerebral disturbances.

Dr. Seba, in closing: I desired to bring out the fact that very young infants stand surgical operations well and the sooner they are treated surgically the better. Heretofore it has been the method not to operate when we should have operated. I also wanted to emphasize that coccygeal tumors arising from the coccyx should be classed as spina bifida.

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Note: The patient died September 1, 1906, from peritoneal tuberculosis believed to have been acquired from tuberculous cow's milk. A further report will be made on the tuberculous condition.

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## THE TREATMENT OF APPENDICITIS OTHER THAN SURGICAL.\*

BY W. S. ALLEE, M. D., OLEAN, MO.

I have three reasons for writing on this much hackneyed subject. First, to defend country doctors against the unjust criticism so often heaped upon them by surgeons for not advising an early operation in appendicitis. Second, to give some reasons why, in my judgment, medical treatment must and should have a place in the treatment of this disease. Third, to arrive at a consensus of opinion, if possible, as to what the best medical treatment may be.

That appendicitis is a surgical disease under conditions of choice is perhaps not questioned by those most competent to speak. I am convinced that under ideal conditions an early operation, (as soon as the diagnosis is made) is the best treatment, but whether these conditions can ever be had in large sections of our country is extremely doubtful. I practice in a territory one hundred and fifty miles from a surgeon who makes any special pretensions to operative skill in abdominal surgery.

There are many doctors of good skill and mature judgment in this territory, who are capable of performing most of the recognized oper-

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\*Read before the Gasconade-Maries-Osage Medical Society, October 26, 1906.

ations in surgery, but no one of them claims to possess the special skill so essential to insure the best results in this class of cases, because this is only attainable by a large personal experience in abdominal surgery. I doubt whether an operator devoid of this experience can show any better, if as good results, by an early operation in every case as may be had by the best medicinal treatment. Personally, I do not feel warranted in operating except in cases where conditions imperatively demand it, nor do I know of a neighbor who has the skill acquired by personal experience that could show results which would justify me in calling him to do this work for me. As a rule, to which there are few exceptions, my patients have not been able to pay for the services of a competent surgeon to visit and operate at their homes, or to pay traveling expenses, hospital fees and a modicum for the operator's services in the city. In an experience of thirty years, I can barely recall half a dozen cases that I have treated in persons who were amply able to pay for the services of a good surgeon and other necessary expenses incident to an operation for appendectomy.

Again it is not every one who will submit to an operation in the first forty-eight hours of an attack, even where conditions can be made favorable and the physician advises it. The custom is to discuss this question as though the physician could have his way about the treatment, and his failure to act for the best interest of his patient as being evidence of his incompetency and deserving condemnation. The country practitioner knows that this is a "condition and not a theory which we have to meet." And we should therefore study the conditions and determine if possible, what line of treatment will give the best results under such circumstances as must govern our choice of a plan of action.

It means nothing to me to be told that a few eminent surgeons can show a mortality of 2 per cent. or less by early operative treatment, as compared with 10 to 15 per cent. of deaths under the various plans of medicinal treatment. I have to deal with that very large class of patients who are unable to avail themselves of that superior skill.

I think it unwarrantable, and in very bad taste, for the surgeon to show so little respect for the opinions of physicians when they essay to discuss the medicinal treatment of appendicitis. Their opinions as to results in medicinal treatment are formed largely from what they see in the most unfortunate class of cases, which constitute from 5 to 10 per cent. of the whole number of cases treated by the physician, the 90 per cent. who recover without complications having had no occasion to consult the surgeon.

We must admit that there is a wide divergence in the views of physicians as to what plan of treatment or management other than operative gives the best results, and this is an additional reason why so little credence is given to the supposed beneficial results from medicinal treatment in certain quarters. Here as in the treatment of most



diseases we can follow no universal rule, each case should be carefully studied, and "the man not forgotten while we are palpating his appendix."

First I would advise perfect rest in the recumbent position.

It is also advisable to withhold all food, as digestion is greatly impaired and little good can come from feeding while much harm may be done. We know the conditions are ideal for fermentation and resulting gaseous distention, provided the material is supplied the stomach, and will add greatly to the discomfort and danger of the patient.

While the active disease process is confined to the appendix or its immediate connections, a purgative is perhaps beneficial, and my preference is for one grain doses of calomel every hour until 8 or 10 grains shall have been taken and unless free purgation results, follow with half ounce of rochelle salts every three hours until the desired result is attained. After unloading the bowel, provided all food is withheld, I can see no good reason for the use of purgatives for the next three to five days. I can understand how much harm can be done by unduly stimulating peristaltic action when rest is the prime indication. If there is considerable local peritonitis there will be muscular rigidity as a result, which will greatly impede, if it does not prohibit the action of purgatives. An attempt to crowd the stomach under such unfavorable conditions always results in failure and adds greatly to the patient's distress and danger.

Under such conditions the so-called Ochsner treatment is by far the most satisfactory in my estimation. The stomach is to be washed out if it is partially loaded with indigestible substances, as shown by the material vomited, and the lower bowel may be unloaded by an enema, if it is deemed necessary in order to relieve the griping pains that result from the efforts of nature to dislodge offending matter. The stomach and lower bowel having been emptied, all food and water should be prohibited and no medication except by hypodermic administration. I forbid the use of any kind of food or drink from three to five days, when if the active stage is quieting down, water and small quantities of liquid food may be given.

The object is to prevent fermentation and tympanites by keeping from the stomach such agents as are active or passive in their production, and to arrest peristaltic action with the hope of localizing the inflammation, and in the event of pus formation, to have the abscess walled off or circumscribed by adhesive lymph, thereby preventing a general peritonitis.

This is substantially the treatment recommended by Dr. Ochsner in those cases where peritonitis has developed from appendicitis and the patient is not in condition to get the best result from immediate operation.

Formerly I had great faith in the beneficial effect of purgatives in

this disease, believing that my patients usually improved after free purgation, but I now know that in all but the mild cases my purgatives did not act until the patient was improving, in other words the action of the bowels was the result of the improvement rather than the cause. There being less inflammatory action, the normal peristaltic action is resumed because the muscular spasm is relieved, thereby favoring or permitting the customary effect of purgatives, instead of the reversal of peristalsis and vomiting that is almost sure to occur after their use while the active stage of inflammation is present.

The pain, which is at times almost unbearable, may be relieved by local applications of ice, or by the use of hot applications by means of the hot water bottle or flannel cloths wrung from hot water and applied over the painful area. Where local applications will not afford relief, morphia should be injected hypodermically, in one-fourth grain doses, repeated every hour until pain is relieved. This should not be repeated except it is urgently indicated for the relief of pain. When thus used, I cannot understand where there is valid objection to it. Its use is condemned, as I know, by most surgeons and by a few general practitioners, but the reasons given for withholding it apply rather to its abuse than its proper use. The statement is sometimes made that, to give morphia in appendicitis is criminal. This is in my opinion an exaggerated and silly statement, wholly unwarranted by the experience of a large number of competent physicians. No sensible practitioner would narcotize a patient now under the belief that he was curing him of his disease, nor would he give morphia in sufficient doses to mask the symptoms of his general condition.

A few years ago I attended a meeting of The Missouri State Medical Association at Hannibal. A St. Louis Surgeon of no mean ability who was also attending the meeting, was attacked with a severe pain one morning about 2 o'clock, and he believed it was caused by appendicitis. His first cry was for morphia, sending his roommate at this unseemly hour to get a hypodermic syringe and tablets of morphia, and they were used with good effect.

At that time he was teaching clinical surgery in one of the St. Louis schools, and on the return trip to St. Louis laughingly related his experience to the late lamented Dr. A. B. Shaw and myself. He stated that it had been his practice for years to condemn the use of morphia in appendicitis as little less than criminal, and yet when he believed himself a victim of the dread malady, his first cry was for the relief of the pain by a hypodermic injection of morphia.

My contention is not, that morphia is curative and ought to be used as a routine treatment, but that its use when restricted to the relief of pain is not only justifiable but is commendable.

It has been my desire to adopt such treatment as seemed most rational under the circumstances which are of necessity controlling factors in a choice of plans. Past experience has convinced me that my sins have been those of commission rather than of omission.

I have not regretted so much my failure to have done more, surgically or medicinally, for the fatal cases that have fallen under my care, as that I might better have left undone some things which time has convinced me are ill advised. One of these is the persistent use of purgatives in those cases where nature had attempted to localize the active trouble by arrest of peristalsis.

# Journal Missouri State Medical Association

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## EDITORIAL.

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### THE NEWSPAPERS AND THE PATENT MEDICINE FRAUD.

Referring to the series of articles in *Collier's Weekly* by Mr. Samuel Hopkins Adams, the *Literary Digest* (October 13th) marvels at the scarcity of newspaper comment upon these articles.

To us the reason for this silence is patent for it is an undisputed fact that the patent medicine manufacturers expend enormous sums annually advertising in newspapers. But how does this affect the "freedom of the press"? The answer is very simple—Money. The manufacturer gives to the newspaper a contract to publish his advertisement and as part of that contract there is a clause which prohibits the newspaper from publishing anything "detrimental to the interests of the advertiser."

That is why we have seen no newspaper comment upon the exposures so graphically depicted by Mr. Adams; that is why the people are denied knowledge of the fact that they drink bad whiskey, become drug fiends and jeopard their lives when they swallow the stuff advertised to cure their ills; that is why the medical profession is refused the aid of this powerful weapon in its effort to subvert the evil of that curse of the American people, the patent medicine fraud. The United States Government has prohibited the sale of peruna among the Indians because of its intoxicating properties. Did the newspapers announce this to the general public? No. That would be "detrimental to the interests of the advertiser." Thus does the business office seal the lips of the editors of the paper and contravene its usefulness to the people—for money.

It seems incredible that there should be any subject of public concern upon which our newspapers would fail to comment freely, fearlessly and intelligently. The beef trust, the insurance scandals, the



bridge trust, the ice trust, the oil trust, the so-called milk trust, all have been discussed without let or hinderance. But these people do not advertise in newspapers. The patent medicine fraud—the great American *fraud*—is untouched by that greatest exposé of frauds, the press. With full publicity in the newspapers, how soon would the people cease doping themselves with whiskey, cocaine and morphine. And that horde of fakers who declare they can cure cancer and consumption, restore hearing to the deaf, make the blind see and the lame walk, would soon cease to flourish in our midst. But the press is muzzled, gagged with a bar of gold.

If the damage were limited to the purse of the gullible it would not be necessary for us to antagonize the sale of the stuff, but it weakens them mentally and physically. Nor does it stop with the individual himself but it warps the mental growth and dwarfs the physical development of his offspring for the reason that the victim, innocently at first and later through the force of the habit, becomes its slave. And, more's the pity, without knowing the danger. But the manufacturers know it.

We hope that soon we shall be strong enough to drive out these quack-salvers who grow rich by wringing dollars from the sick and the afflicted, and give in return a large bottle of fraud with a big collection of lies. If our organization is worth anything it should begin to make its influence felt. Every candidate for the legislature should know that the county medical society in his district is a unit for him if he will support the measures introduced by the medical profession, but determinedly and eternally against him if he oppose those measures or does not support them. Then we shall obtain those laws which we must have before we can protect the public against devastation, disease and the death, the results of its own ignorance.

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### COCAINE AND THE ANTI-NEGRO RIOT IN ATLANTA.

The many interpretations of the causes of this, the latest crime against peace and order in a community, were so many-hued by distortions due to racial prejudices or party spirit run riot, that the mind fairly reels before the avalanche of overheated, misdirected magniloquence. Newspapers of the first order and distinguished weeklies and monthlies whose usual tone is one combining cool judgment with a stoical philosophy, seem to have vied with each other in fierceness of denunciation of the mob spirit or in exultant joy resulting from justice having been meted out to black offenders.

In all the heated discussion which we have heard or read small mention, if any, is made of the real offenders of society—the cowardly and ignoble element, unfortunately white, which for gain panders to the mentally and morally stunted black to further dwarf his low morality

by putting within easy reach a drug upon which the laws of every state in our Union should place an embargo unless prescribed by reputable physicians. That the authorities at Atlanta are supine as regards the sale of cocaine, and that all sorts of men who would like to prey on society in other cities but are prevented from doing so by the stringency of the laws, congregate in communities where supineness gives them opportunities of making money, are facts known to the thinking part of the laity. But though the foregoing is so well known that its mere repetition is a twice told tale the elemental truth of the why and wherefore of the ungovernable sexual passion of the morally deficient negro as was evidenced in the attacks on white women in Atlanta, has been overlooked in all the secular press and magazine notices that have come to us. Dr. W. G. Moore in his excellent oration "The Possibilities of Medical Education," read at the annual meeting of the Missouri State Medical Association, July, 1904, said:

"An intelligent and reliable young man who traveled in the South for one of the wealthiest wholesale drug houses in St. Louis, told me that certain drug stores were known as 'dope stores' because of their enormous sale of morphine, cocaine and similar remedies. These are dispensed over the counter without a prescription to any irresponsible white or negro man or woman. Who knows how many of the fiendish crimes that are constantly being perpetrated are due to this shameless practice?

"The millionaire proprietor of this same wholesale firm instructed his young salesman to look after the 'dope stores' especially and spare no effort to outbid his competitors for their patronage."

Although these are burning words their import makes necessary their quotation as applicable in our arraignment of unscrupulous druggists who, unhampered by law, wittingly and for gain are guilty of a most dastardly crime against the public.

Authorities in psychiatry are one as to the cocaine habit causing hallucinatory confusional insanity. The low mentality of the negro would appear to us excellent soil for the development of this mental disorder, especially when subjected to a toxemia following the abuse of cocaine.

A. C. Benson, in a recently published life of Rosetti, gives the following harrowing account of the poet while under the influence of chloral: "But his painful hallucinations continued to beset him. Whether he was tricked by his own fancy, or merely misinterpreted ordinary sounds is not clear, but he was often under the impression that cabmen and other strangers insulted him; airy voices taunted him with epithets of intolerable ignominy; even a thrush which sang insistently in his garden was believed by him to have been trained to ejaculate terms of obloquy to annoy him." How much greater must the hallucinations be in the morally purblind and mentally deficient negro when the noxious qualities of cocaine play havoc with his primitive mind.

With these dicta before us, we feel justified in demanding the

strong arm of the law to stop at once the nefarious practices of a number of men whose despicable means for making money are responsible for outrages committed against innocent women by an unfortunate class of men of a mental status, honeycombed with superstition, crass ignorance and uncontrollable erotism.

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## TWENTY-FIFTH ANNIVERSITY OF JACKSON COUNTY MEDICAL SOCIETY.

On Thursday evening, October 18th, the Jackson County Medical Society celebrated the Twenty-fifth Anniversary of its present organization.

This society was established in Kansas City in 1874. It remained dormant from 1878 to 1881 at which time it was re-organized on the second of December. The officers for 1881 were:—President, C. D. McDonald; vice-president, Joshua Miller; secretary and treasurer, Charles W. Adams, all now deceased.

The celebration was in the form of a banquet at the Coates House, in Kansas City. The committee in charge of the banquet was composed of Doctors E. von Quast, C. B. Hardin, Max Goldman, A. E. Hertzler, and J. N. Jackson.

The guests of honor were the ten living charter members of the society, namely:—Dr. N. A. Drake, Dr. C. A. Dannaker, Dr. G. W. Davis, Dr. A. A. Freyman, Dr. J. D. Griffith, Dr. J. T. Mitchell, Dr. J. C. Rogers, Dr. E. W. Schauflier, Dr. Flavel B. Tiffany and Dr. John Wilson.

We congratulate Jackson County Medical Society in rounding the quarter century mark of its existence. Ever standing for all that would subserve the best interests of the profession in its own county as well as throughout the state the members in Kansas City and Jackson County have set an example for progressive, earnest work. The remarkable growth of Kansas City as a commercial center has found its medical men always abreast of every advance, her physicians occupying a prominent place at the front of any movement that stood for progress and taking the initiative in every reform which promised improvement in the moral, sanitary or hygienic condition of the city.

In the medical affairs of the state the physicians of Jackson County have devoted their time and their energies to the welfare of the organization with zeal and vigor and without their help much that has been done could never have been accomplished.

With a membership of almost 300 they will be able to do more in the future than they have done in the past.

Again we congratulate the members of Jackson County Medical Society.



### DR. DRAKE A CANDIDATE FOR THE LEGISLATURE.

Dr. N. A. Drake, of Kansas City, is a candidate for the state legislature.

Jackson County Medical Society, with characteristic energy, has instituted a warfare against quacks and charlatans and we are pleased to know that one of her members is in the race for a seat in the legislature. He has the unanimous support of the county medical society. Without doubt every doctor in the county will support Dr. Drake's candidacy and we hope he will be elected.

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### DEKALB COUNTY MEDICAL ORGANIZED.

The latest addition to the list of County societies in affiliation with the State Medical Association is that of DeKalb County. This society was organized by Dr. W. E. McKinley, Councillor of the 6th district.

The officers elected were Dr. H. P. Yeater, President, Dr. J. C. Quinn, Vice-President, and Dr. R. A. Evans, Secretary and Treasurer. The following are the charter members: H. P. Yeater, Maysville; J. C. Quinn, Clarksdale; W. J. Clark, Maysville; E. R. Stroup, Weatherby; R. A. Evans, Amity; L. A. Richey, Fairport.

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### LEWIS COUNTY ORGANIZED.

Just as we are going to press we learn that Dr. H. J. Jurgens, Councilor for the second district, has organized Lewis County with twenty charter members. The second district is now solidly organized and we congratulate Dr. Jurgens and the physicians of Lewis County. A list of the officers and members will be published in our next issue.

The following physicians have recently made application for membership in their respective county societies.

Altham, A. G.....	Metz.	Fuson, J. A.....	Mansfield.
Ammerman, I. W.....	Nevada.	Gallemore, H. J. M.....	Lexington.
Ash, C. O.....	Moberly.	Givens, H. K.....	Fayette.
Bailey, S. M.....	Elsberry.	Glahn, G.....	Palmyra.
Bankhead, C. L.....	Paynesville.	Gray, Amos D.....	Atlanta.
Barnes, C. E.....	Mountain Grove.	Goeslin, P. A.....	Luray.
Barnes, W. S.....	Pilot Grove.	Gooch, W. H.....	Elmer.
Barnes, W. T.....	Pilot Grove.	Gove, H. S.....	Linn.
Bartlett, E. M.....	Clarksville.	Guthrie, J. F.....	Golden City.
Bartlett, J. W.....	Clarksville.	Haase, Freeman.....	Revere.
Bast, Lee .....	Naylor.	Haden, J. W.....	Plevna.
Beatie, Wm. R.....	Rogersville.	Hampton, Z. M.....	Centralia.
Bennie, W. D.....	Nayton.	Hangler, A. G.....	Clarence.
Biesemeyer, L. F.....	Westphalia.	Hardin, G. S.....	Marshall.
Blackledge, H. I.....	Commerce.	Hardin, W. R.....	Louisiana.
Blue, A. B.....	Hannibal.	Harris, W. E.....	Oran.
Bohning, A. H. P.....	Lincoln.	Hayes, O. B.....	Centralia.
Bollinger, Wm. H.....	Seymour.	Hemphill, W. A.....	Elsberry.
Bowles, S. A.....	Westphalia.	Hereford, R. ....	Louisiana.
Brooks, J. M.....	Goldencity.	Hexherlin, T. G.....	Louisiana.
Brown, J. C.....	Lewistown.	Hickerson J. T.....	Centralia.
Brown, J. O.....	Wright City.	Highfill, M.....	Marshfield.
Bruton, L. D.....	Hartsville.	Hinson, C. A.....	Revere.
Bruton, T. S.....	Seymour.	Hogg, Garrett.....	Ardmore.
Burgwin, A. B.....	Fayette.	Hubbard, J. M.....	Mountain Grove.
Byrns, R. M.....	Frankford.	Hulen, J. C.....	Centralia.
Caldwell, C. W.....	Slater.	Hume, J. R.....	Doniphan.
Callahan, R. G.....	Luray.	Humphrey, B. F.....	Hurdland.
Campbell, F. H.....	Morrison.	Humphrey, H.....	Locust Hill.
Carr, G. M.....	Marquade.	Hunter, L., Jr.....	Clifton Hill.
Chambers, J. C.....	Shell City.	Irwin, Thos.....	Moberly.
Chandler, J. J.....	Lutesville.	Jacklett, J. A.....	Rutledge.
Cole, Paul E.....	Steffensville.	Jackson, J. D.....	Herndon.
Cook, J. N.....	Advance.	Jackson, B. Y.....	Palmyra.
Crumley, A. C.....	Wyanconda.	James, E. F.....	Marshfield.
Davis, J. D.....	Louisiana.	Jarvis, W. M.....	Slater.
Diggs, J.....	Hawkpoint.	Jeksi, Z. C.....	Nevada.
Dougherty, H. U.....	Mt. Grove.	Jett, J.....	Linn.
Dreyfus, J. W.....	Louisiana.	Jones, J. T.....	Linn.
Dunlop, H. E.....	Canton.	Jose, J. E.....	Belle.
Dutton, C. K.....	Moberly.	Justice, W. H.....	Lancaster.
Edwards, J. C.....	O'Fallon.	Kampschmidt, A. W.....	Columbia.
Ellery, W.....	LaGrange.	Keller, J. H.....	Glenwood.
Ellery, W. L.....	LaGrange.	Kennedy, J. J.....	Frankford.
Evans, E. E.....	Fulton.	Keiling, F. U.....	Elsberry.
Farmer, A. J.....	Hartsville.	Knight, G. R.....	Benjamin.
Ferguson, A. D.....	Auxvasse.	Knox, J. A.....	Whiteside.
Ferrell, C. A.....	Hannibal.	Kraft, A. J.....	Augusta.
Florence, T. S.....	Marshfield.	Lane, G. G.....	Sprague.
Ford, W. W.....	Gordonville.	Lane, I. R.....	Mt. Grove.
Foster, G. F.....	Memphis.	Lewellen, C. P.....	Ashburn.
Frame, C. N.....	Ewing.	Lissock, H. M.....	Lexington.

Little, J. B.....	Norwood.	Ringen, A. H.....	Sweet Springs.
Littlejohn, Wm. ....	Worland	Rodes, W. R.....	Mexico.
Locker, G. E.....	Iantha.	Rogers, R. M.....	Mansfield.
Lowry, J. Z.....	Clifton Hill.	Roselle, T. A.....	Palmyra.
McCutchan, G. L.....	Canton.	Royston, W. P.....	Harwood.
McGee, C. P.....	Fayette.	Ryan, R. A.....	Norwood.
McGlasson, T. F.....	Lewistown.	Sanders, C. A.....	Marble Hill.
McKim, H. W.....	Labelle.	Sanford, S.....	Palmyra.
McLean, T. A.....	Higginsville.	Sanfos, F.....	Portage Des Sioux.
McReynolds, U. R.....	Knox City.	Sayers, J. S.....	Rogersville.
Marchand, J. B.....	Monticello.	Schofield, R. B.....	Lewistown.
Mayfield, S. A.....	Advance.	Selby, W. H.....	Moberly.
Miller, T. U.....	Sikeston.	Shafer, R. R.....	Panama.
Mitchell, R. A.....	Clark.	Shafer, W. W.....	Sweet Springs.
Morris, W. J.....	Edina.	Shanks, C. O.....	Canton.
Newton, F. H.....	Elmer.	Silverstone, H. E.....	Lexington.
Norman, R. M.....	Ava.	Smith, C. A. ....	Annada.
Orear, W. C.....	Marshall.	Snoddy, S. H.....	Slater.
Ott, Chas. W.....	Higginsville.	Story, J. H.....	Clarksville.
Owens, H. I.....	Fulton.	Stouffer, R. W.....	Napton.
Owens, N. O.....	LaGrange.	Stuckert, Otto.....	Whiteside.
Owens, S. P.....	Moberly.	Talbot, C. W.....	Nevada.
Paxon, C. E.....	Hannibal.	Taylor, J. W.....	Huntsville.
Paxton, G. L.....	Cyrene.	Terrill, W. P.....	Huntsville.
Payne, N. S.....	Lexington.	Terrill, W. R.....	Clifton Hill.
Pearson, D. M.....	Louisiana.	Thomin, G. F.....	Williamstown.
Pendleton, T. O.....	Pilot Grove.	Tilt, J. C.....	Mountain Grove.
Perry, A. A.....	Williamstown.	Toalson, G. C.....	Mexico.
Petty, J. W.....	Rutledge	Thompkins, Junius, ..	Canton.
Phelan, J. T.....	Marshall.	Townley, W. D.....	Chamois.
Pierce, Don.....	Newark.	Treadway, W. W.....	Clarksville.
Piper, C. E.....	Slater.	Trimble, Eli.....	Seymour.
Pollard, W. H.....	Eolia.	Unsell, J. B.....	Eolia.
Powell, C. E.....	Elsberry.	Vanoy, L. D.....	Norwood.
Powers, C. E.....	Amoret.	Wallace, E. J.....	Centralia.
Prewitt, G. E.....	Hawkpoint.	Walters, F. E.....	Bowling Green.
Primm, N. B.....	Deerfield.	Warren, J. T.....	Boston.
Psey, J. J.....	Naylor.	West, C. A.....	New Cambria.
Rabenau, Wm. J.....	Fo rler son.	White, M. S.....	Lingo.
Raines, J. D.....	Maywood.	Willer, I. H.....	Louisiana.
Rambo, J. H.....	Glenwood.	Williams, J. H.....	Hume.
Ramsey, A. J.....	Walker,	Williams, W. H.....	Wainwright.
Ramsey, R. L.....	Advance.	Willis, H. T.....	Shelbina.
Rebo, T. A. S.....	Alexandria.	Wilsey, A. R.....	Hurdland.
Reese, H. S.....	Wayland.	Wilson, R. E.....	Labelle.
Reid, D. W.....	Slater.	Wiseman, L. P.....	Monticello.
Rickhoff, A. H.....	Chamois.	Wregers, T. L.....	Flint Hill.
Rickhoff, H. L.....	Augusta.	Yeager, J. B.....	Memphis.
Riggs, J. M.....	Columbia.	Yount, J. H.....	Sikeston.
		Young, J. A.....	Wyaconda.

[If there are any errors in spelling of names, please notify the Editor at once.]



## COUNTY SOCIETY NOTES

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### BENTON COUNTY MEDICAL SOCIETY.

At the regular meeting held in Warsaw on October 9th the following officers were elected for the ensuing year:—President, E. L. Rhodes, Lincoln; vice-president, S. O. Davis, Warsaw; secretary and treasurer, W. G. Jones, Lincoln; delegate, Marion Dillon, Fairfield; censors, G. A. Greeson, J. H. Walton, and S. O. Stratton.

Doctors Curl and Dillon were elected to membership.

This being the annual meeting no scientific matter was presented but a number of papers are promised for the next meeting.

The interest in the society and its work is growing steadily. There was a general discussion on methods for extending the work of the society. Every member pledged his help and influence to make the work of the society for the coming year more effective than in any previous year.

The next meeting will be held at Lincoln, January, 1907.—W. G. JONES, M. D., Secretary.

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### CASS COUNTY MEDICAL SOCIETY.

To the Editor:—In behalf of the Cass County Medical Society its secretary sends thanks for the very commendatory special mention in the September issue of the *Journal* of the good work our association is doing.

G. W. Farrow, Prest.  
W. F. Chaffin, Secy.  
M. P. Overholser, Councilor.

At our September meeting the following program was rendered, each one responding with a well boiled down scientific paper and spirited discussions followed their reading: "Chloroform in Labor," by Dr. T. W. Adair; "Ear Ache," by Dr. A. R. Elder; "Puerperal Sepsis," by Dr. R. H. Burney; "Intestinal Antisepsis," by Dr. R. P. Yeagle.

Dr. H. S. Prentiss made his report as our representative at the meeting of the state committee on Public Health and Legislation, held in St. Louis, July 10th.

At the close of the meeting there was such a heart to heart hand-shaking that any stranger happening upon the scene might have mistaken the manifest good cheer to be the result of an old-time Methodist class meeting.—W. F. CHAFFIN, Secretary.

## HOWARD COUNTY MEDICAL SOCIETY.

The society met in the office of the secretary at Fayette on October 6th.

Drs. Hume and Thompson presented a very interesting case of amyloid degeneration of the liver and kidney in a boy five years of age.

Dr. Smith reported Dr. C. H. Lee's condition much improved. Dr. Lee was infected while operating on a case of gangrene several weeks ago.

Dr. Watts reported the convalescence of the patient whose left kidney was removed on September 4th on account of a tuberculous infection of that organ.

The Hon. John A. Wood was present at the meeting and addressed the members on the relation of the doctor to the family and the duty of the state to doctors and the people. He said the legislature would enact such laws as would protect the health of the people and would give proper recognition to suggestions from the physicians of the state.

Dr. W. S. Thompson, of the state board of health, gave a brief synopsis of the work of that body and suggested certain changes in the present laws governing its work.

A general discussion by the members showed that they were alive to the necessity for certain changes and would support the measures advocated by the State Medical Association.

At the next meeting on November 2nd the Hon. S. C. Major, Mayor Davis, Drs. Burginn, Moore and Smith will read papers. It is expected that this will be one of the most enthusiastic meetings ever held.—C. W. WATTS, M. D., Reporter.

## JACKSON COUNTY MEDICAL SOCIETY.

MEETING OF SEPTEMBER 11TH.

The Jackson County Medical Society held the first regular meeting of the season on Tuesday, September 11th. The Thirty-three members were present.

A communication under date of August 25th, from the Secretary of the Missouri State Board of Health, was read, calling the attention of the members of the State and County Societies to the necessity of adopting stringent measures tending toward the prosecution of various "quacks" and "irregulars" infesting the territory of our city and state; and stating further that the said board would willingly and as effectually as possible lend its support to whatsoever our County Society should undertake to do in regard to this matter.

After some remarks by various members this communication was received, and the secretary was requested to write to The Missouri State Board of Health in complaint of a Mr. C. H. Carson, who is claiming to practice medicine and who has not even a license to do so.

Dr. L. W. Luscher referring to the above communication stated that it was important to the medical profession and the public as well, that only such men be elected to our state legislature as would influence the best legislation regarding public health and similar measures, and he suggested that our society adopt resolutions asking the privilege of learning, through a committee, how candidates for the legislature stood on such questions. The Chair appointed on this committee Doctors: L. W. Luscher, S. Grover Burnett, and Robert O. Cross.

The Jackson County Medical Society endorsed Dr. N. A. Drake as a candidate for the Missouri State Legislature.

Another communication under date of August 24th, from the Secretary of the Missouri State Medical Association was read in which he informed the members of the County Medical Society that the American Medical Association having in view an increase of membership of the various local societies recommended to the state associations that all county medical societies in affiliation with the former accept the annual dues of new members prior to January, 1907 as payment of all dues to January, 1908, including subscription to the State Journal to January, 1908. Upon motion, this communication was received and the request agreed to.

Application for membership was received from Dr. John C. Sheldon and referred to the Board of Censors.

The chairman of committee on banquet reported favorable progress: the date for the occasion is Thursday, October 18th. A Motion prevailed that all arrangements for the banquet be left to the pleasure of the committee in charge.

The scientific program consisted of two papers, one by Dr. William Rice on "The Use of Apomorphine in Highly Nervous Conditions," the other by Dr. S. Grover Burnett entitled "Therapy of the Static Current." Both papers were entertaining, original, and instructive, and were well discussed by Drs. Franklin E. Murphy, Maggie L. McCreary, Scott P. Child, and Roger B. Brewster. Doctors Rice and Burnett closed the discussion.

#### MEETING OF SEPTEMBER 18TH.

The regular weekly meeting was held on Tuesday evening, September 18th. President E. H. Thrailkill, in the chair. Forty were in attendance at this meeting.



The application of A. E. O'Flaherty was received accompanied by letter stating that the applicant was at present practicing medicine and was therefore eligible for membership in the society and requesting that action upon his application be taken by the society at its earliest convenience. Ballot was spread, the membership committee having reported previously, and Dr. O'Flaherty was duly elected to membership.

The matter relative to the death of one of our highly respected members, Dr. M. P. Sexton, was referred to the necrological committee.

The president, who had attended a recent meeting of the State Board of Health and Committee on Public Health and Legislation in St. Louis, presented a brief report of the proceedings of that meeting. Upon motion this was received.

The scientific program consisted of papers on "The Report of a Case Demonstrating a Difficulty in the Diagnosis of Early Pregnancy" by Dr. C. Lester Hall; and a paper on "The Effect of Lead Poisoning on the Blood" by Dr. Frank J. Hall.

Dr. C. Lester Hall's report was very valuable because of its practical character, presenting, in a striking manner, points which the general practitioner is likely to encounter at any time.

Dr. Herman E. Pearse in opening the discussion emphasized his opinion in regard to the diagnosis of pregnancy in difficult cases by relating several instances wherein it becomes necessary to perform laparotomy: He stated that when one was in doubt in cases of extreme difficulty, it is oftentimes well to perform exploratory laparotomy. Others who entered into the discussion were Drs. A. E. Hertzler, Newton, McVey, C. B. Hardin, E. A. Burkhardt, H. B. McCall, E. M. Hetherington, F. H. Brunig, C. M. Fulton, Dr. Hall closed the discussion.

Dr. Frank J. Hall's consideration of the "Hematology of Lead Poisoning" was received with leisure and interest by all present. He stated that investigation along this line was very recent and had been carried on by leading pathologists of the country. The blood changes in this affection were very characteristic and related to the leucocytosis, hemoglobin test, normoblast count, and presence of granular basophilia. He stated that the microscopic examination of the blood was of special diagnostic value in sporadic cases. Dr. E. W. Schauffler, who has had a wide experience cases of lead poisoning, opened the discussion, stating among other things that the blood resembled that of anemia and chlorosis. Others taking part in the discussion were Drs. Franklin E. Murphy, F. H. Brunig, and John Punton. Dr. Frank Hall closed the discussion.

#### MEETING OF SEPTEMBER 25TH.

The Jackson County Medical Society held its regular weekly

meeting on Tuesday evening, September 25th. Thirty were in attendance at this meeting. Applications for membership were received from Drs O. L. McKillip, Roger Brewster, and O. P. Faires, and were referred to the Board of Censors. The application of Dr. John C. Sheldon was upon motion again referred to the Board of Censors.

The professional program consisted of the report by Dr. Herman E. Pearse of a case of "Gunshot Wound of the Abdomen With Several Perforations." This occurred in the case of a boy who was operated on two hours after the accident; operation was followed by recovery. The discussion was opened by Dr. B. C. Hyde in the absence of Dr. E. von Quast who arrived later in the evening. Others taking part in the discussion were: Drs. C. Lester Hall, William J. Frick, E. von Quast, C. M. Fulton, J. W. Kyger, F. H. Brunig, and Maggie L. McCrea. Dr. Pearse closed the discussion.

No further business appearing, the Society adjourned until October 9th—no meeting to be held during the week of the fall festivities.  
—MAX GOLDMAN, M. D., Secretary.

#### LIVINGSTON COUNTY MEDICAL SOCIETY.

The October meeting was held at Chillicothe on the 17th, a large number of the members being present.

Visiting physicians from Kansas City and St. Louis read papers and a number of clinical cases were presented for discussion. Dr. Geo. W. Groves, of Kansas City, read a paper on "Eye and Ear Complications in Bell's Palsy." Dr. J. M. Frankenburger, of Kansas City, read a paper on the "Surgery of Carcinoma of the Rectum." Dr. A. W. McArthur, of Kansas City, contributed a paper on the subject of "Fracture of the Shaft of the Femur." Dr. Emory Lamphear, of St. Louis, presented a paper on anesthetics.

This was one of the most interesting meetings in the history of the society. The next meeting will be in January, 1907. W. M. GIRDNER, M. D., Secretary.

#### MISSISSIPPI COUNTY MEDICAL SOCIETY.

##### MEETING OF SEPTEMBER, 3rd.

The society met in regular session Monday, September 3rd. Drs. F. L. Finley and F. S. Vernon were elected to membership.

The resolution adopted by the Executive Committee of the Judicial Council of the State Association relative to dues of new members for the year 1906-1907 was voted on and passed by the society.

The following cases were reported and discussed—Purpura haemorrhagica; coxalgia, pulmonary tuberculosis, by Dr. A. W. Chapman.—Hysteria, simulating rabies in a ten year old boy, by Dr. A. J. MARTEN.

## MEETING OF OCTOBER 1ST.

The Mississippi County Medical Society met in open session on this date at the county court-house. Dr. W. F. Kuhn, superintendent State Hospital No. 4, Farmington, delivered the address of the evening. His subject "Why Some People Go Insane" was well received by the mixed audience. Dr. Kuhn is an able and forceful speaker, and had his subject well in command. His address was very practical one and based upon his long experience with the insane, and his plea for more humane and scientific treatment of these unfortunates should bear fruit. The society adopted the following resolution:

Resolved.—That the Mississippi County Medical Society extend to Dr. Kuhn its appreciation and thanks for his kindness in accepting their invitation to address the society.

The next meeting will be devoted to the discussion of "Pneumonia."—R. K. OGILVIE, M. D., Secretary.

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## MONITEAU COUNTY MEDICAL SOCIETY.

The regular quarterly meeting was held at Latham on October 11th.

The district Councillor, Dr. W. S. Allee, of Olean, was present and made a talk on "Fees and Fee Bills." His remarks were highly appreciated and freely discussed by the members.

A paper entitled "The Physician and the Association as seen by the Country Doctor" was read by Dr. J. B. Norman. After an enthusiastic discussion the secretary was ordered by motion of the society to send Dr. Norman's paper to the State Journal with the urgent request that the paper be published.

The next meeting will convene on December 13th at California.—W. R. PATTERSON, M. D., Reporter.

[Dr. Norman's paper will be published in the JOURNAL at the earliest possible date. Ed.]

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## NEW MADRID MEDICAL SOCIETY.

The regular meeting was held on October 4th at Marston. None of the members had prepared a paper for the occasion and the meeting was devoted to a general discussion of complications of and following labor.

The next meeting will be held at New Madrid on December 6th. At this meeting the officers for the next year will be elected.—W. J. SPARHAWK, M. D., Reporter.



## RALLS COUNTY MEDICAL SOCIETY.

The Ralls County Medical Society met in regular session at Ilano on October 11th. The scientific program consisted of a symposium on typhoid fever, the contributions being furnished by Drs. Baskett, Walter, Waters and Hendrix.

This being the annual meeting the following officers were elected for the year 1907:—President, Fred Walter, Perry; vice-president, W. T. Hendrix, New London; secretary and treasurer, T. J. Downing, New London; delegate for two years, W. T. Waters, New London.—T. J. DOWNING, M. D., Secretary.

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## ST. GENEVIEVE COUNTY MEDICAL SOCIETY.

The regular monthly meeting was held on October 10th. The entire evening was devoted to the report of cases and presentation of patients and specimens. The evening proved most interesting to all the members and a general discussion of the cases followed.

The next meeting will be held on the second Wednesday of November.—R. W. LANNING, M. D., Reporter.

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## SCHUYLER COUNTY MEDICAL SOCIETY.

Schuyler County Medical Society met in regular session on October 23rd. On account of bad weather a number of members were prevented from attending this meeting. No papers were read but the evening was very profitably spent in discussing cases reported by those present.

The next meeting will be held at Lancaster on April 17, 1907.—H. E. GERWIG, Secretary.

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## SHELBY COUNTY MEDICAL SOCIETY.

Regular meeting was held at Shelbina on September 18th. There was a good attendance of the members.

After a general discussion as to whether physicians should make a charge for advice and prescriptions given over the telephone, it was unanimously decided that the members should make a charge in those cases where the advice or the prescription made a regular visit unnecessary.

Doctors Daniels, Willis and Hanger were elected to membership.

Dr. Carson reported a case of arterial thrombosis.

At the October meeting the program will include a symposium on typhoid fever.—A. M. Wood, M. D., Reporter.

## VERNON COUNTY MEDICAL SOCIETY.

A called meeting was held at Nevada on October 4th. Dr. Helm, state organizer, was present and made a short talk on the importance of frequent meetings.

In future we shall meet monthly instead of quarterly. Drs. Wield Talbot, J. M. Yater, C. L. Kiethly and J. W. Van Blaricum were appointed to read papers at the next meeting. Dr. I. W. Ammerman, of Nevada, was elected to membership.

The next meeting will be held at Nevada on November 1st.—T. B. Todd, M. D., Secretary.

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JOHN T. HODGEN DISTRICT MEDICAL SOCIETY OF  
NORTHWEST MISSOURI.

At the meeting on September 10th the following officers were elected: President, A. H. Vandivert, Bethany; vice-president, J. C. Quinn, Clarksdale, secretary, A. C. Long, Denver; treasurer, J. W. Quinn, Clarksdale; secretary, A. C. Long, Denver; treasurer, J. W. Conard, Albany, censors; Geo. Smith, J. K. Phipps and J. M. Yeater. Drs. McKinley, Whitely and Conard were appointed a committee to draft a constitution and by-laws. Meetings will be held quarterly.

The next meeting will be held at Albany, November 13th.

# JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

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Volume III

DECEMBER, 1906

Number 6

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## ORIGINAL ARTICLES

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### MISSOURI SANATORIUM FOR THE TREATMENT OF IN- CIPIENT TUBERCULOSIS; AND ITS LEGAL FOUNDATION.\*

BY W. M. BAYLISS, M. D., MT. VERNON, MO.

An illustrious historian once said, "From my youth up I have heard of nothing but ruin, and witnessed nothing but progress." And while this statement may have been true only in part, the intellectual development in no other age can parallel that of the age in which we live.

In no period of history, have the efforts at research been so admirably rewarded as those in the last half century. Especially does this remark apply to the medical department of our knowledge, and all things else collateral thereto.

Although Missouri did not initiate the present management of incipient cases of tuberculosis, she has shown herself not recreant to her duties to her living, and to her unborn as well.

By virtue of an act of April 15, 1905, entitled an act to establish a sanatorium for the treatment of incipient tuberculosis of the lungs, an appropriation of fifty thousand dollars was made, and a Board of Commissioners was appointed, one of whose duties was the location and construction of the above named institution.

Before entering upon the work contemplated under this act, the members of the commission, as per statutory requirement, entered into bonds to the State of Missouri, in a sum prescribed by the Governor, conditioned that they would faithfully discharge all duties required of them.

After organization the commissioners proceeded to examine the various sites offered by the different cities and towns of that part of the state in which alone the institution could be located—the only region in which we could secure the statutory elevation, and other requirements. This was accomplished with comparatively little diffi-

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\*Read at the annual meeting, Jefferson City, May 1906.



culty, and we proceeded immediately, as per act above quoted, to visit certain eastern institutions of similar character, for the purpose of obtaining information relative to plans and construction. This would have been a failure had we not secured the services of the able and efficient architect, Senator H. H. Hoenschild, who examined in detail, recording results, every institution visited; and especially did the New York and Massachusetts State hospitals, and the famous Trudeau Sanatorium of the Adirondacks of Northern New York give us every opportunity possible to secure the information desired.

Returning to St. Louis on the fourth of September, we proceeded to the contest of ballots, in the selection for the sanatorium of one of the many beautiful sites among the Ozarks.

The propositions were numerous, some of them voluminous; but the one presented by Mt. Vernon, Lawrence Co., was easily the choice of the commission. It consisted of a two hundred acre tract of land, water and electric light for five years, and telephone service for fifty, together with three thousand dollars in cash, all of which was donated by the citizens of Mt. Vernon.

The site chosen is a beautiful one, on the Frisco railroad, with an elevation of about fourteen hundred feet, two hundred eighty miles from St. Louis, and one hundred sixty miles from Kansas City, both cities being in direct communication through the medium of the above named railroad.

Plans for the institution have been matured and the general scheme as presented and adopted, consists of an administration building and eight villas for "cottage sanatorium purposes," and in the language of the statute, to be constructed of brick or stone, the interior subdivisions to conform as nearly as possible to the most modern improvements, having reference to comfort and convenience of patients therein; and to be as near fire proof as may be with partitions of fire-walls between wards.

Bids for the contract will be opened the fourth proximo, and an earnest effort made to have the institution ready for the reception of patients before the meeting of the next General Assembly.

In view of the fact that the primary object of this hospital is the arrest and extirpation if possible of the disease, only such patients as are thought to come within statutory limitation, and whose general condition is such, that there may be a reasonable hope of improvement, arrest, or permanent relief, should be admitted.

As great as is the necessity for sanatoria for advanced tubercular patients for whom there is little or no hope, such service is unquestionably incompatible with that contemplated by the act creating the Missouri State Sanatorium for Incipient Cases.

The question of tuberculosis is a formidable one: and that it may not be thoroughly elucidated in complete detail within the immediate

future should not stand in mitigation of our failure to endeavor to arrive at important conclusions relative thereto.

During the last two decades, astonishing has been the favorable progress in the management of tuberculosis; amazing as to results, general apathy being changed to increasing zeal.

This may be a dangerous condition, and I fear that even those who have been most valiant in the contest may find it necessary to take a conservative position, lest extravagant claims, made by recent converts and discharged patients, apparently cured, result in reaction and prejudice against the out-door management, which is of infinite value to incipient sufferers. This is brought about by exaggeration of the true facts, which in the end damage the cause by encouraging misguided individuals in distressing conditions to seek relief through a hopeless channel. The defeat to which they are subjected is disastrous in the extreme, and in spite of the efforts of friends of the management to explain away the fallacy of the statements of those not in authority, they and their friends become bitter in denunciation of the open-air treatment, as is now the condition at Rutland, Mass.

Frequently has this question been asked: "Of what value to the state will this institution be?" The answer not properly coming within the province of this paper, we pass it by.

The individual relief afforded is worthy of consideration, and deserving of encouragement—a rational effort, a broad charity—"the best sort of philanthropy."

But one of the most important results to be derived from sanatorium treatment of tuberculosis, is the educational element, which will be of inestimable value to those who, from various causes, may be deprived of the advantages of institutional management; and to others in their efforts to avoid infection.

I wish all could know something of the results of the educational campaign in St. Louis by the combined forces of the Society for the Prevention of Tuberculosis, and the Civic Improvement League. Good has already come of this united effort, and the two societies together are endeavoring, through direct legislation, to secure an equipment with adequate facilities for combating this disease. That there exists a necessity for this institution, we assume as granted—concurred in by all.

The intrinsic value to be derived consists in, first individual relief; second, the educational element—the general information for the masses, not only as to the care of patients discharged, but as to the most improved methods of self-protection against possible infection.

The board of managers to be appointed immediately following the notification to the Governor of the precise time when the hospital will be ready for the reception of patients, will have "all the powers, rights and privileges" given to the boards of managers of other eleemosynary institutions, and to perform all the duties required of said other

boards; and, in the language of Sec. 24 of the act under consideration, "Said Sanatorium hereby established, shall in all respects not inconsistent with this act, be governed by and conducted according to the laws governing other eleemosynary institutions of the State, with like powers, privileges and immunities, as far as the same are applicable and not inconsistent with this act."

In order to assist the deserving poor, and thereby avoid useless expenditures in going to and from the sanatorium, where they receive the first information to the effect that an arrest of the disease is beyond the hope of human possibilities, arrangements, statutorial or otherwise, should be made for preliminary examinations by at least one regularly appointed, capable physician in each county, and possibly others additional in the larger cities, application for said examinations having been made by proper officials of the poor. This would obviate the unnecessary traveling and other expenses of patients who could not under the law, be admitted.

Through such a staff of regularly appointed physicians, an excellent plan of observation of patients discharged as improved or cured, could be established; and an admirable system of correspondence perfected by which valuable statistics can be secured, as is done in similar institutions in other states and countries.

At this point it seems to me an important question arises. What is to be the source of our maintenance fund? Private patients, or those possessing adequate estates, can be admitted as in other state hospitals. But the poor: How are they to receive the heritage?

House bill No. 226 makes no reference to the subject; and I fear county authorities will hesitate. Possibly our charitable, and other humanitarian bodies, such as the Society for the Prevention of Tuberculosis, The Civic Improvement League and other forces yet unorganized, may and it is to be hoped they will, should the necessity arise, come to the relief of the worthy poor until adequate legislation can be secured.

And now in conclusion, I wish to say, that while other locations might have offered greater satisfaction to other portions of this Commonwealth, by virtue of their proximity to the more densely populated centers, we believe the institution to be well situated.

We hope for ample equipment; and when properly officered, supported by a management both vigorous and intelligent; and again by the unfolding of an unbroken phalanx of the only profession having for its goal the alleviation of the sufferings to which man is heir. Then, and only then, can the Missouri State Sanatorium for the Treatment of Incipient Tuberculosis of the Lungs, secure a respectable position in the galaxy of American institutions.



## THE WHITE PLAGUE.\*

BY H. JERARD, M. D., PLEASANT HILL, MO.

In making some fragmentary and scattering remarks relative to the subject selected for me I cannot hope to offer anything you have not heard or thought of at some time in your medical career. The subject is one that is fraught with responsibilities and no little danger to all of us and to all with whom we have to do. I speak of consumption, the "White Plague" or phthisis pulmonalis, as I shall only think of the disease as it affects the lungs. And what I shall have to say will in no sense be entitled to be called a scientific communication.

As to the immediate cause of this disease I suppose all are now agreed since the investigations of Koch are generally accepted. Just when this bacillus made its advent on this earth we find no record. The Lord may have made him when he made man, but we do not think so. But the early writers such as Hippocrates mentions a disease called phthisis which means "wasting" and is no doubt our old enemy consumption, or as sometimes fancifully termed, "White Plague." The symptoms and clinical picture of this disease are too familiar to all for me to attempt to tell you anything along that line. There seems, so far as the records go, no place on this earth where the bacillus of consumption is not found and no people who do not fall victims to its ravages. It seems to be omnipresent, then why do not all persons have the disease, as all are exposed. It is said that for the world about one-seventh die of consumption. Years ago Dr. T. J. Mays said consumption is "a nervous disease in its origin." And from his viewpoint we think his statement about correct. Because all metabolic processes are under the control of the nervous system and we think that while everybody is daily inhaling these bacilli from the dust of our homes, they do not find a suitable place to germinate because conditions are in favor of the individual and against the bacillus. And also we find that the slaves of the United States in 1860 were no more subject to consumption than the whites. While in 1902 the per cent. among the white population was the same as in 1860, but among blacks or former slaves it had increased 300 per cent. This condition, some might say, is due entirely to changed sanitation, etc., but we think not entirely so, but in a great measure to the care, worry and consequent nervous strain put upon them in the effort to make a living. And that the brain and nervous system endure the strain of this contest is attested by the fact that before the war insanity, like consumption, was comparatively rare among the slaves. In support of this it is stated from Georgia State Hospital for the

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\*Read at the annual meeting, Jefferson City, May, 1906.

insane was increased 70 per cent among the colored population. In North Carolina 256 per cent, and in Virginia 1,600 per cent, among negroes and that they readily contract consumption. These things go far to prove that this strenuous life with its increasing cares and worries is a potent factor in bringing about a nervous exhaustion and lowered vitality in parent and offspring, thus producing a very favorable state of system for the tubercle bacillus to overcome the natural protectors of our health. We believe the leucocytes, phagocytes, blood plasma, and perhaps other secretions of the body all manifest an antagonism to these disease producers, and proceed to engulf, digest and destroy them up to a certain limit and are generally equal to the task if there is no impairment of their functions by reason of lowered vitality from any cause. We believe that one great cause of this germ getting a place to reproduce itself from lack of proper lung expansion, allowing many cells of the lungs to never functionate or if so but feebly. Hence, in these cells, notably the apices of the lungs, residual air is retained and other effete matter producing a favorable soil for the growth of pathogenic organisms. This is borne out in some degree at least, by noting that avocations which hamper the full action of the apices of lungs do favor the development of consumption. And also by the fact that deep full respiration, when habitual does improve these cases. We say habitual advisably because at this altitude it has to be done by constant thought and effort. But when they go to higher altitudes they feel the demand for more air and breathe deeply from necessity, hence the climate or location benefits them to a marked degree. Now I am aware that some have said and taught that this deep breathing is a mistake as it causes some hemorrhage by breaking up old adhesions and an extension of local diseases. That may apply to some certain case but I think not as a rule. We believe that a perfect functionation for every organ is to be desired and if full inspirations cause pain from breaking up of adhesions it will ultimately result in good by restoring lung function and an increase of leucocytes to diseased area and thoroughly removing disease products.

While it has been said "to tell a person he has consumption is much like reading his death warrant to him," still that depends very largely as to whether secondary infection has taken place or not. As long ago as 1845 autopsies at the Edinburg Infirmary proved that in all subjects dying at or over forty years of age, from other diseases than the lungs, gave conclusive evidence of at one time having had consumption, or tubercle in the lungs, and had entirely recovered. And before this last date Roger and Boudet showed from the Paris hospital that half to four-fifths of persons dying about the age of seventy and not from lung disease, had recovered from consumption at some former time in life. And we still believe, as no doubt all medical

men do, that thousands every year have consumption and entirely recover from it.

We take it that consumption in its worst features comes from within rather than from without, nor do we wish to be understood to say that pulmonary consumption can come without the infection by the bacillus of Koch, but that the condition of the patient enabling him to become infected is the condition of combat. The efforts of therapeutists for the last hundred years have been to kill the bacillus. That may be ideal, but in my opinion will never succeed. A hundred years ago the people of the large Italian cities and others conceived the idea that consumption was very contagious and passed very rigid laws that anyone afflicted with this malady must be immediately isolated, his bedding and clothes burned, the house stripped of its furnishings, plaster knocked off, floors taken out and burned and not to be again inhabited for a year. They carried segregation and prophylaxis to a degree that could not be done under any but a despotic government. And still we find many medical men and the people just now about ready to repeat their follies, for it did not lessen the disease in the least. The popular treatment now is we think outdoors, and believe it to be rational because it puts the patient in the best environment, makes him eat more and digest better, and as we think the bacillus of consumption is very largely an indoor animal, he is removed from source of continuous infection. The trouble with us often is, we do not see our cases until secondary infection has taken place, or we do not recognize the nature of the infection until this is the case. Then we find our patient has a temperature of say 99 degrees or 99.5 degrees but a habitual pulse rate of 120 per minute, and if this ratio continues for days and weeks you may give your strychnia, good food, reconstructives and fresh air and everything you can think of or your friends suggest, but until some good doctor finds some means of combating the toxemia of secondary infection we shall continue to bury our patients with the "White Plague."

#### DISCUSSION.

Dr. W. S. Allee, Olean:—It has sometimes been taken as evidence by persons unfortunately afflicted with this disease that where they recognize heredity as a factor it was almost of necessity a hopeless case. We should be more careful to teach the source of this infection. It is unfortunate that our people make these spasmodic efforts at controlling the disease. There is a false conception of what is required, or is even practicable or permissible. You have all known of families which became panicky when they learned that one of their family or one of their neighbors had consumption. They shun the patient's company as they would a leper. Such people should be taught that every healthy individual has the inherent power of resisting this infection when placed under hygienic conditions. Cleanliness, fresh air and sunshine meet all the requirements of those not sick. Another thing, it is unfortunate that our profession as a body refuse to see or to discuss but one feature of a problem at any given time. For the past few years the attention of the profession



has been drawn to the sanitarium treatment to the exclusion of drug treatment. I believe in fresh air and sunshine but I don't believe this is the only method. Our patients should have the advantage not only of hygienic conditions but they should have the best dietetic and the best medicinal treatment known to our profession. It is unfortunate that men of standing in our profession so frequently make loose statements, sometimes quoted as evidence, that there is little in the use of drugs in the treatment of phthisis. Every quack running over our territory takes advantage of such statements to convince the public that they have little reason to expect help from the doctor. But recently a man has been in my neighborhood who has fleeced the people by holding out the statement that he could give the people something that the doctors could not give. He quoted Dr. Holmes, of Boston. The doctor was a brainy man, yet I question whether he was a great physician. As to altitude and climatic changes in the treatment of tuberculosis, I think it is most unfortunate that the profession has expected so much from this source, not but that I believe that there are certain localities that are superior to others for a person suffering from tuberculosis, but often it is wholly impracticable for persons suffering from tuberculosis to seek a change of climate. I don't know of anybody cured by a change of climate without a permanent change of residence. Because it is so often impossible for people to go into a new locality and establish themselves and support their families, too much stress should not be laid upon the necessity for a change of climate. Health is not always to be had simply by going to a different climate. To get results in the treatment of tuberculosis an early diagnosis is absolutely essential. How many times is a case allowed to drift along with a diagnosis of cold, or something of the sort until irreparable damage has been done. I believe that a large per cent. of cases of tuberculosis diagnosed early and treated by a competent physician is benefited, and that a large per cent. of them is cured. Let us make the diagnosis early and then take the patient into our confidence. Don't tell a man he has consumption. So eminent a man as Dr. Jacoby says, "I tell my patient, 'you have tuberculosis. If it should get worse it will run into consumption. Cases of tuberculosis often get entirely well, so you have no reason to despair.'" You must impress it upon your patient that he must give strict attention to hygienic laws and follow exactly your treatment. Any man can be honest with his patient without depriving him of hope of ultimate recovery.

Dr. William Porter, St. Louis:—In providing for a state sanatorium for tuberculosis, Missouri has made for itself a new epoch. The question of the cure and limitation of consumption is one of the most important and the most remunerative that has ever come before the citizens of any state. In our state, estimating from the official reports, last year it cost nearly \$20,000,000 and the deaths were about 5,000. In Illinois the economic loss was \$36,500,000 and the deaths 7,000. In the United States at the present rate 7,000,000 of those now living will die of tuberculosis. Now for the other side. The Governor said yesterday that "in three centuries the average life of the working man has been doubled in England." Let me add to that statement. Within three decades the death rate in England and Germany from tuberculosis has been decreased over 50 per cent., and in some of our eastern cities, 43 to 45 per cent. Apply that to our own state and it means an annual gain of \$10,000,000 and an annual life saving of 2,500. It means that in this generation there will be a diminishing of the death loss by 300,000.

This, then, is the problem that it is ours to solve and it can be solved, for tuberculosis is both curable and limitable. What is the method? *Education*, education, not of the physician alone, but of the citizen. I can not speak of the different factors of this great educational advance, but I would

note two. First, the sense of individual responsibility, especially that of the true, conscientious physician. Every death from consumption is a cry for each of us for more light. Second, the sanatorium. Our state institution and others are not being built to cure all the cases in our state. It is a reasonable estimate that there are 30,000 cases in Missouri. The state sanatorium can at its best, only care for one-half per cent. Of these cases in the incipient stage, a large portion should be cured, not benefited but cured. These will carry into the homes of the state the simple and common sense method, by which as Pasteur said, "consumption will be eventually stamped out." What are some of these? Care, hygiene and prevention of communication, conserving the strength, courage, proper diet, exceeding watchfulness and care of the individual symptoms, clothing, out-door life and the many things that the earnest physician will find to do in each case.

I congratulate the commission on the site selected for the sanatorium and the earnestness they have manifested. I heartily approve of the promise that only the executive building and two infirmaries are to be of the more elaborate architecture, as demanded by the present law. It is hoped that the legislature will so amend the law that the more modern tent and temporary structures may be provided for these incipient cases. One lesson that our sanatorium must teach is that in the early cases the tent, the hammock and the lean-to are better than any palace, and the worst that can happen to an incipient case is to treat him as though he were fit only for the hospital. This is demanded in cases of the second and third degree, but for the incipient case we must seek to return to nature under the most simple and natural conditions. It is in this way that we have a right to expect our sanatorium to be a powerful educator in this great interest in which every citizen should have a part.

Some of our best authorities have said that in 1926 consumption will be as rare in Germany as smallpox is in the United States, and that in ten years it will be as rare in England. What it will be in the United States depends upon us.

I am glad that the gentleman who opened the discussion called attention to the fact that perhaps many of us are placing less importance upon medication than we should. It is true that writers on this subject may seem to hold in reserve the power of medication, but I would not care to conduct a large sanatorium if I were to be deprived of the opportunity of therapeutic treatment. There is no disease upon earth that requires more watching than this individual one. The physician who examines a case and then tells the patient to report in thirty days, is not living up to his obligations to that patient. One very important question is your responsibility in the early diagnosis. When a case comes to us how many of us will relieve the patient of his outer clothing and examine not the front of the chest only but the posterior surface as well? Sometimes we can find there the indications when the condition is still within control.

Dr. J. M. Allen, Liberty:—We must recognize the fact that germ life is just as much dependent upon environment as human life. Carrying this idea with us we can better comprehend the effects of germ life on the human structure as well as the application of remedial treatment. Again, we must remember that germ life like ours is limited to as fixed a period as ours, and that the duration of its life in the human body depends solely upon how soon the pabulum upon which it grows and develops is consumed. This period varies in different germ diseases; indeed in the individual it may differ as to time of duration. We see this strongly illustrated in the exanthemata which only lasts a few days; in typhoid fever, smallpox, etc., germ life may continue much longer.

The same is true of phthisis pulmonalis. The germ of tuberculosis has a natural selection for the structures in the order they are named, viz: The apex of the lung; the duodenum; the glandular system; bone. The germ is supposed to enter the human system through the fauces or tonsils, then passing through the glandular system to the point of natural selection.

The germ of phthisis is not in itself very destructive to tissue nor is the irritation it produces enough to create much fever, but it is always associated with other destructive germs, the staphylococcus and the streptococcus, which produce the febrile symptoms.

This pabulum upon which the germ of tuberculosis exists can not be explained only by heredity. In former days all cases of abscess of the lung were considered as phthisis pulmonalis no matter what was the cause of the abscess. Today with the microscope this mistake should not be made. I have within the last five or ten years witnessed five cases of abscess of the lung that were produced by either chronic interstitial pneumonia or thrombosis, in none of which did there exist the germ of tuberculosis. As a negative but strong testimony that phthisis pulmonalis in the individual without heredity transmission of this pabulum never occurs let me refer to the thousands of physicians who have had thousands of times the tubercle bacilli conveyed into their mouths and never had phthisis pulmonalis; nor do I believe, again excluding heredity, that it is ever a congenital disease. If this is true then the proper course for us to pursue to eradicate this great white plague is to legislate with reference to marriages.

Can phthisis pulmonalis be cured? My answer is, yes a small per cent. can be cured. This answer presupposes that the lung is the only structure involved. If, however, the duodenum is involved we lose a sheet-anchor in treatment because a disease of this organ practically excludes fatty matters, carbohydrates and saccharine matters, thus depriving us of a great essential, food and nutrition. If this organ is not involved I always give a favorable prognosis if I can control the medication, the nutrition and the climate.

I have three cases that I treated over twelve years ago in which the diagnosis was verified repeatedly by the microscope, that are now well. These are in Missouri.

Let us take a physiological view of the treatment, beginning with the point most frequently attacked, the lung. Nowhere in the body can we bring the *vis medicatrix naturae* to our assistance as in the lung by increasing the amount of blood passing through it, thereby bringing to bear the soldiers of our bodies to fight the enemy, the leucocytes. This is done by regular, systematic gymnastic exercise of the lung by inhalations; and at the same time, heavy massage of the muscles of the chest. The patient's chest should be measured accurately at the beginning of treatment, then every third or fourth day afterwards, and as the air cells develop by the increased amount of nutrition and this distention you can measure the prospects of a favorable termination. This gymnastic exercise of the lungs should be practiced every eight hours. The patient's occupation should keep him out of doors in the fresh air as much as possible during the day, then well ventilated rooms for sleeping. His digestive tract should be carefully investigated and only food selected that is easy (for him) to digest and assimilate. If there should exist fever and night sweats we may take it for granted that the lung has been invaded by the germs staphylococcus and streptococcus. Internal medicine will not arrest these fevers and night sweats but serum prepared especially for the destruction of these germs will do it promptly. From two to four days daily injection of full doses will arrest the fever.

*Internal remedies:* I place beechwood creosote at the head of the list. A favorite combination of mine is creosote 5 drops, tincture of nux vomica 10



drops, tincture of cinnamon one-half dram, glycerine one and one-half drams, three times daily before eating.

I do not pay much attention to the cough unless it is harassing; then I use the hydrochloride of heroin.

*Now in regard to the value of serum:* I have treated three cases successfully with the use of serum in combination with the other treatment mentioned above and think I derived benefit from the serum, but would not be willing to risk it alone.

*As to climate:* There is no question that there are climates where the tubercle bacilli can not live and develop. This is the climate for phthisis. The same fact is true of other germs, for instance, malaria, yellow fever, cholera. In the United States the West is the best place for the consumptive. My results have been best in Arizona and I send my patients there in the first stage with the advice to make it their homes. However, a few have returned and are enjoying fairly good health.

If my patient has a good appetite, digests and assimilates his food well, I never use tonics. If I need further tonics I confine myself to the glycerophosphites. I enter my protest against the use of alcohol, believing that it is injurious.

I think it very important to pay careful attention to the function of the heart and its nutrition. This is met with tincture of digitalis and tincture of strophanthus.

I rarely use cod liver oil, never if there is any duodenum inflammation. The same is true with reference to the use of iron.

Dr. W. F. Morrow, Kansas City:—This question has always been one of great importance to most practitioners of medicine. Tuberculosis in one sense of the word is in close relation to a malignant growth, i. e., as soon as you have made your diagnosis you lay down. There are many things we overlook in the care of these patients. One of the great things to be considered is proper food-nourishment. Another thing is proper surroundings. These patients should be placed somewhere under the jurisdiction of a competent superintendent under the support of the government. There is no move on the part of the profession that requires more encouragement and assistance than the effort to establish an institution for the care of these patients down here in the state. Much responsibility devolves upon the profession in starting that institution and placing it under rigid rules. It should be under the control of a thoroughly competent man, a man wide-awake to the conditions which confront him. Until last July I was a member of the State Board of Health and I am going to tell you some things I learned there in connection with this disease. The State Board of Health should be composed of men thoroughly competent to fill these places and this institution should be placed very close to the State Board of Health. There are now through this state organizations in every county and it would be very easy to accomplish this. If you allow these cases to fall into the hands of a careless doctor you can not tell where it will end. Now, as to the doctor; if the doctor is properly equipped and understands the clinical appearance and can watch the patients carefully afterward this is of the greatest importance. I don't believe much in heredity, but if you will stop tuberculous people from spitting in hotels and elsewhere you have done a good deal. Every time those bacilli are spit into the street they are dried and breathed up by hundreds of people and what will be the result? I am not afraid of contracting the disease while I am in a state of health but let our powers of resistance be lowered from some cause and we are just as susceptible to it as other persons. The principal, I might almost say the only feature of great importance is the education of the public. It is not uncommon to find a

mother full of tubercle bacilli nursing her infants. You will never accomplish what you are trying to do until you teach the public that there can be and should be protection of these people and show them how, teach them how to protect themselves from the white plague.

Dr. A. H. Vandivert, Bethany:—There has been nothing before this society more important. I fully agree with all that has been said. I am here only to add a few remarks to emphasize the points made. The education of the masses is important. An arrangement should be made so that every school teacher can be examined that it may be known that children are not going into schools loaded with these bacilli. It is common for our schools to be infected with tuberculosis. The hygienic conditions of schools is likely to bring on an irritation that leads to the development of tuberculosis. Education of the people is an important matter and when a correct understanding of these things is sufficiently spread among the masses it will relieve the profession of a great burden. As I construe the literature there are three essential points in the management of this disease, abundance of fresh air, good, nourishing food and rest. These are the cardinal features. The climate does cut some figure but the comforts of home in any climate are better than a most salubrious climate without such comfort. How many patients are sent to the mountains where they must do without the comforts of home and the object in their going there is defeated because they have not these comforts and the opportunity to take the rest that is essential. Now as to the treatment. One thing that is prominent is the cough. There may be a wholly unnecessary cough or there may be an excessive cough; they cough much with little expectoration; or they may not cough enough to clear their lungs of this material. If the cough is unnecessary or excessive it should be controlled, yet you want to get rid of the offensive material. This is an important point. Then, in those cases of tuberculosis where you have a mixed infection from other bacilli you have a serious condition to face and there is where the fixed inflammatory process develops in the breaking down of the lung substance.

Dr. C. A. Mitchell, Blythedale:—The great question that has bothered us is heredity. If we only take the position that we inherit strong or weak cells then we can easily educate the people along the proper lines. Everyone in health has an autoantitoxin within himself. If you will get rid of this troublesome idea of hereditary taint then you will have accomplished a good deal. As to a change of climate, the depressing effect of a change of location is a very bad thing. There have been many theories as to the best climate. In 1840 or 1844 a number of tuberculous patients went into Mammoth Cave. They built cottages and put up tents to live in. The idea was to secure a perfectly equable climate. After being in there a few months without sunlight a film developed over the eyes, and the inevitable breaking down followed and none of them ever lived to get out. As to the matter of county health boards, I would recommend that every county have its health board to pass upon the health of each teacher that enters our public schools. Another point is the increase of the tuberculosis death rate here in our country when there is such a decrease in Europe. That should certainly be a lesson to us.

Dr. Jerard, in closing:—I agree with everything everybody has said. Twenty-five years ago I was exceedingly pessimistic, now I am optimistic because I think the clouds are breaking. One speaker wants to cure consumption by an increased blood flow to the lungs. Dr. Patton, of Chicago, claims that in no initial case of heart disease followed by a serious condition did a case of phthisis pulmonalis ever develop. We have all heard of cures by the application of galvanism to the pneumogastric. And we have tried

all of the methods, nearly, but we don't get the results we see published. How many cases get well by these reported procedures we don't know but we do think that a number recover under these treatments. These cases must be carefully selected. What is good for one case is not good for all. We should be very careful when these cases come to us in saying that we can not cure them, for if we do they will only go to somebody who *will* give them something that they are told will *cure* them. As we are animals the most successful way of meeting conditions would be to improve the species. If we could do that by breeding we would get the ideal condition. As to the diagnosis, if we are going to wait until we find the bacillus before we make the diagnosis it will come too late for practical purposes. I don't wait for that when I know a patient has consumption. Rather than wait for the microscope to make the diagnosis, let us throw the microscope away.

Dr. Porter, in closing:—I have just been asked to present to you very earnestly the necessity for your support of our state institution. I am not a politician, I scarcely know to which party I belong, but in this great work I am a partisan. It is the most important work that could be brought before the citizens of this great state. If by education we can save \$10,000,000 to our state every year by methods now working in Philadelphia and fail it is no one's fault but our own. If we save 40 per cent. of the 5,000 who annually die in our state, it is a humanitarian service it is ours to compel. If in fifteen years tuberculosis can be made comparatively unknown in England, what can be said of us if we allow this disease (a parasitic disease which Pasteur says can be stamped out) to run rampant through the families of Missouri? When I see what should be done, what can be done, what is ours to do, I feel that no burden that can be put upon me is worthy of consideration if I can advance this cause. Some two or three years ago this matter was under consideration in this building, but it was pigeon-holed. The next year we received only \$50,000 against \$10,000,000 we expect to save in this state. And even this gift has been so handicapped that it can not be all utilized for building by the commission. And yet this commission has formulated plans and is interested in it as an educator. This institution is for the care and restoration of the tuberculous. It is not for the cure of advanced consumption but for the cure of tuberculosis, the incipient stage of the disease. With these people restored to health you are sending back into the homes of Missouri missionaries who will tell the people how to live. What is this worth to your state? Not merely the one hundred cases that get well every year, though that is worth a good deal to those hundred people, but you have this incentive to do better work. I believe in the *argumentum ad hominem*. If this is such a great saving, the proposition is with you, that you use your influence, see the men who are influential, ask them to consider this matter, ask them to follow the lead of our Governor, who today assured me of his exceeding interest in this matter. Place at the head of this institution a man who will worthily represent it and you will have a teaching element that will be of more value to our state than any other factor. When you go home will you not bear this in mind? Will you not say to your legislators that \$500,000 can be well invested within the next three or four years? If you will write the secretary of the Society for the Prevention of Tuberculosis in St. Louis he will be glad to send you literature on this subject. You have a duty to perform right now in choosing your representatives. Why, two years ago our committee was nearly smothered because of the meeting of the committee on horse racing and they had ten to our one. But today horse racing in this state is nearly dead and we are very much alive. As to the expenditure of money, I believe this commission is doing its best. Some of us have been a little censorious regarding the elaborateness of some of the buildings, but the law has demanded this and at the next meeting of the legislature this can be changed and the commission empowered to utilize the lean-to. If each physician in this room will recognize this state institution as his own charge and that he can not shift the responsibility the result of the work will never be in doubt.



## LIMITATION OF SURGICAL PROCEDURES IN CANCER.\*

BY G. WILEY BROOME, M. D., ST. LOUIS, MO.

Out of all these years of arduous labor and self-denying effort on the part of scientific members of our profession, the essential cause of cancer remains as much of a mystery today as ever. Plainly stated at the outset we can all agree that the especially distinguishing nature of carcinoma is due to the fact that the disease sooner or later invades the neighboring tissues, enters the lymphatic channels from its starting area and finally gives rise to regional and general metastasis—a condition for the lack of a better term we describe by the word malignant. Then again we are forced to agree that the disease begins as a local affection and in this stage the possibilities of surgery have been frequently demonstrated, but in the class of cases to which this paper especially relates—I mean those in which the carcinoma occurs in the cavity of the abdomen—the fact is just as clearly proven that barely ten per cent. of all the patients with carcinoma within the belly cavity come within the reach of complete surgical eradication for the simple reason that the disease has gone beyond the primary stage of its existence, notwithstanding it is possible for you to read reports every day from one or another of the many enthusiasts who undertake extreme radical operations and in most instances as a mere routine plan of practice. A newspaper report published only yesterday tells us that at a cancer hospital in St. Louis thirty-one operations were performed and the operations were all major and all successful. The inference is that the person writing the report meant to convey the impression that the thirty-one operations performed for cancer up to this date in this hospital were all of the gravest sort, but all were cured; and since the report was published in the public prints for the benefit of the public and especially the victim of cancer many lay persons might be misled into a misinterpretation of just what can be done in a curative way for those afflicted with this dreaded disease.

At the very introduction of this paper I want to emphasize a certain material phase, which I fear is being lost sight of by the more zealous operators. I refer to the underlying principle which should apply in all departments of the healing art and that is that the prevention and successful treatment of any disease must depend on the neutralization or removal of its cause and that the sensible and scientific progress in the treatment of cancer can only be hoped for after we have succeeded in elucidating its essential cause. Enthusiastic surgical radicalism must give way to a just appreciation of our position in regard to the etiology of this mysterious enemy to mankind, un-

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\*Read at the annual meeting, Jefferson City, May 1906.

til it can be shown that our efforts shall prove helpful instead of mutilating and maybe harmful.

Cancer of the stomach and intestines may remain a surgical inheritance, but in my judgment remain so far the single reason that, in these particular anatomical localities, a surgical procedure is the only method left us in the present state of our knowledge, to reach and relieve certain advanced obstructive conditions which are the causes of extremely distressing and death dealing symptoms. While a well-timed surgical procedure may thus afford relief and comfort to the patient suffering from mechanical obstruction due to a malignant growth, on the other hand no patient so afflicted has ever been cured by this means, and we are therefore forced to admit that the present position of surgery in regard to cancer of the stomach and intestines, is at the best only palliative. Every conscientious surgeon must feel that much harm has been done and the lives of some patients shortened by extreme efforts on the part of the over-enthusiastic in trying to make surgery a curative agent in the different forms of malignant disease. I have a case in mind which may serve to illustrate the serious effects of this operative furore. A middle-aged man called upon me some months ago who, among other things, explained that he was then having some dental work done. The dentist noticing several hard masses projecting from the roof of the mouth, suggested that before proceeding further with the treatment of his teeth he consult a surgeon for the purpose of ascertaining the nature of these lumps. I readily diagnosticated the case as epithelioma involving the hard palate. He had never entertained the slightest suspicion of such a serious affliction. In fact, he had always enjoyed the best of health and said at the time that he never felt better in his life. I advised him in several things relating to the treatment of the case, but I especially advised that no surgical operation should be done. I did not see him again until at the end of about ten days, when I met him on the street. He informed me that upon leaving my office he met a near-by physician, who was a friend of his and who had had great success with cases like his own and who had advised immediate surgical operation. The next I heard of this most hopeful-appearing man was that the operation had been performed and that the man had been dead and buried long since. As in this case, so it had been for years in the hands of the over-zealous. The resources of surgery have been taxed to do certain elaborated operations which, even if feasible, are so often fatal and so fruitless of benefit—a triumph, maybe, of surgical art, but not a triumph over disease. History repeats itself in regard to enthusiastic heroism in surgery. These followers generally champion extreme views and recognize no exceptions but persistently pursue the routine practice.

In regard to remedial measures independent of surgery in the treatment of cancer in general, of the more conspicuous use of the

principles of bacteriotherapy as advocated by Fehlisson in using the toxins of the erysipelas coccus, and by Coley in combining with it the bacillus prodigiosus, to defeat the growth of malignant tumors, there have been reported enough well authenticated cases to establish the fact that a few tumors, mostly of unusual types of sarcoma, have been seen to retrograde and, in some cases, to disappear. Can we justly accord even so much to surgical utility in this most treacherous form of malignant disease? In the treatment of epitheliomas and the surface cancers in general, one has but to read the excellent papers contributed by Pusey on the uses of the x-rays. He and others have shown that in many instances the proper use of the x-rays have effected complete cures, that is, cured in the sense that the diseased tissue has been converted into healthy scar tissue, and remained so for years. Pusey declares that he is ready to maintain that the result of the x-ray treatment of epitheliomas are as radical as the results following operation. Further, there are certain features of the treatment of epitheliomas with the x-rays, such as the freedom from pain for the patient, the more satisfactory character of the scars, and greater range of usefulness which entitles the x-rays to be regarded as the preferable method of treatment of most epitheliomas.

In regard to the carcinomas situated in the abdomen, the opinion is expressed that something can be done with the x-rays even in these cases when the necessary improvement in the technique shall have been effected. The fact that the spleen in leukemia can be bombarded out of existence with the x-rays without damage to the over-lying skin, has led to this conclusion. It is also well known that large masses of glands of Hodgkin's disease disappear from the mediastinum from x-ray exposure, and the same thing happens with similar masses of glands in the pelvis. If these things can be done with the x-rays, it is not impossible to suppose that some effect can be produced upon masses of cancerous tissue similarly situated.

But up to the present day, surgery, by common consent, possesses the only hope that we have to offer these unfortunate patients, and in view of the situation the question naturally presents itself: What are the legitimate surgical limitations in regard to cancer of the viscera of the belly cavity? I myself am quite convinced that no surgical effort should go beyond the simple extirpation of the primary nest of cancer cells and the further palliative procedure necessary to remove any obstructive condition found to be present. In other words, extreme radical measures should never be resorted to, such as the removal of the stomach and other extreme operative procedures. The good results do not justify such mutilation. In verification of this, look at the outcome of the work at the Massachusetts General Hospital for the last ten years preceding the year 1900. In that institution there are at work some of the most careful and skillful surgeons in the country. There was a total of 77 cases of cancer of the intestine



operated upon by various surgeons during that period. Thirty-six per cent. died in the first week, 19 per cent. before the elapse of four weeks, 18 per cent. within the first half year, 5 per cent. between six and twelve months 11 per cent. between one and two years, 5 per cent. between two and three years, and 3 per cent. still alive. Thus less than 30 per cent. lived longer than six months after the operation.

I believe it is the trend of the practice of the best meaning men of our craft now to limit their work to the things they know by experience they are able to accomplish and for the immediate benefit of the patient and no further. There are no statistics kept by any of the institutions in St. Louis from which we may learn the actual results of the treatment, surgical and otherwise, relating to purely cancer cases, but I can safely say to you that for the past ten years there have been about 365 persons die of cancer each year. That is, in St. Louis an average of one death every day. In November last there were reported forty-three deaths from cancer, and in the month of November, 1904, there were 29 deaths from the same cause. This is significant since it would seem to indicate that if any improvement has been made in the treatment it is not shown in the mortality reports. If any one is curious enough to carry there figures to cover the number of deaths from this disease in other cities, states and countries, he may gather a fair estimate of the extent of human happiness and life destroyed by this disease in a given time. For instance, should we calculate on the assumption that neither abode nor habits of life furnish exemption from this affliction, we may reasonably conclude that this ratio of deaths occurs everywhere throughout the world, so that if cancer has destroyed four thousand lives within the last ten years in St. Louis alone, the population being six hundred thousand, the State of Missouri, which has a population of 3,200,000, has sustained the loss of 21,000 lives during the same period of time, and a great state like New York would, during the same time, has lost by death from the same cause 47,952 of its citizens. And in the United States, with its 80,000,000 inhabitants, 532,800 lives would have been sacrificed. If we carry these calculations to cover the people of the earth, estimating the rate upon the same basis, the total number of lives destroyed by cancer in the last ten years will reach most startling figures, which are rendered all the more shocking because of the fact of our heretofore absolute inability to reduce the number of deaths. There are other diseases that cause a greater number of deaths, it is true, but there is no death producing disease in the treatment of which we have felt so entirely helpless as in that of cancer. Briefly, then, let us look at the figures representing about the total number of deaths from cancer throughout the world in ten years. On the four continents of the earth there were before 1900, as nearly as it was possible to determine, 1,873,200,000 peoples, namely: Africa, 5,000,000; North America, 380,000,000; South America, 300,000; Asia, 1,487,900,000.

Of this number of human beings I am not very far amiss when I tell you that perhaps thirteen millions of lives have been destroyed by a disease, the etiological influences of which are so subtle and deeply hidden as to still remain beyond the grasp and comprehension of us all.

I must not neglect to refer to one community of the peoples of the earth which appears to be not only wholly exempt from invasions of all forms of malignant disease but also entirely free from tuberculosis and many other similar afflictions. I refer to the natives of Greenland, the Eskimos, who live in the heart of the Arctic region, in the land of perpetual snow. "These people are all children, contented, peaceable, honest and hospitable; they are without a ruler and without any ambition for fame or power—an ideal socialistic community, where property is held in common, politics and the strenuous life unknown, and where all are on the same social plane. They seem to be immune to most of the diseases common in civilized life, and yet they are the filthiest people in the world, so far as the personal care of the body goes. They never wash, not even the face and hands. The smell of the fur clothing and the secretions of the skin are productive of a stench about their persons, and especially in their igloos and tents that is characteristic and, at first, very obnoxious to the visitor. They do not marry in the sense in which we use the word, but mate like animals for convenient periods of time, which may be for life, for a year or only for a hunting trip of a few days." They have neither physicians nor medicines. As I have intimated, tuberculosis and malignant disease in every form are unknown among the natives. It is related that six persons brought to the American Museum of Natural History in New York all quickly contracted pulmonary tuberculosis. In less than six months four of them were dead. The single one who returned to his Arctic home and resumed his former manner of living made a speedy and permanent recovery — a strong argument in favor of the Arctic region for the consumptive. No wound ever suppurates but by a process of aseptic gangrene frost bitten members of the body heal and allow the individual to move about, but in some instances, upon the denuded bones of his feet. Venereal diseases prevail since the white man's visit, but syphilis pursues a mild course and eventually fades out of the body.

The explanation for all this seems to be found in the food they live upon, which consists wholly of iodized raw animal meats. Salt water contains iodine and all animals living on it, and all animals which live on sea food, absorb more or less of this chemical substance. But does this account for the total absence among these peoples of all tumor formations, either benign or malignant? If not, what is a reasonable explanation of the bestowal of this special favor of immunity upon these people.

Let us at all events confine our surgical efforts in regard to cancer cases within the limits of the rule that "when we can do no good we

must do no harm," and in the mean time abide in the faith that a more natural and a more effective and a more scientific remedy will be discovered for the treatment and cure of the carcinomas occurring within the cavity of the abdomen, for, in a way, malignant disease of this anatomical locality is about all that is left to us in the treatment of which no clearly developed or substantial progress has been made from other directions.

REPORT OF A SERIES OF FOUR CASES OF CARCINOMA OF THE CECUM; THE  
FOUR CASES COMING UNDER TREATMENT WITHIN THE  
LAST YEAR.

The cases I am about to report it may be said furnish extraordinary features peculiar and distinct to themselves. I wish to explain at the outset and repeat the explanation later along in order to emphasize the facts relating to the circumstances which brought these rather unique and extraordinary features so forcibly before me.

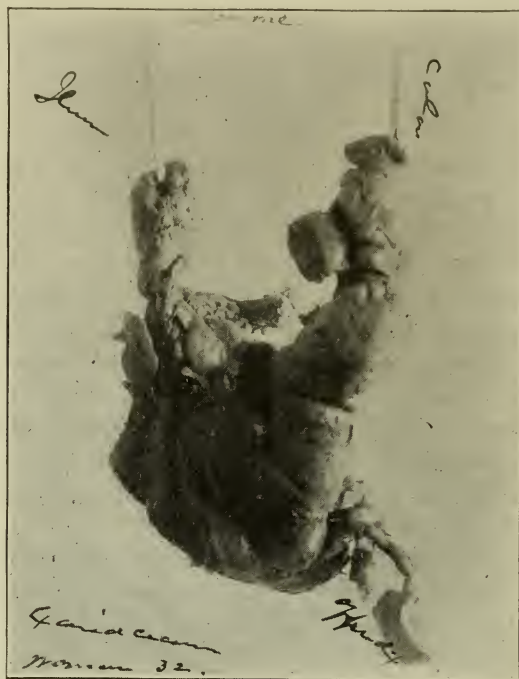
In the first place, this series of four cases all proved, upon opening the abdomen, to be malignant disease of the ileo-cecal coil and yet not one was so diagnosticated before the disclosures by the abdominal incision. In the second place, the belly was opened in each case except one, by the median incision, which circumstance greatly embarrassed me in the further exploratory investigations and the operative procedures instituted.

First case. A married woman, aged 32, came to me in May of last year. She had a history of ill health for several months. During this period of time she lost some twenty pounds in weight. Her complexion was sallow but she was still a fine looking woman. Upon at least two occasions she suffered severely from attacks of colic and the physician sent for administered morphia hypodermatically. These attacks were followed by diarrhoea. She was positive the attacks were caused by after-theater suppers, lobsters, etc., although she stated she had really all of her life experienced much difficulty in keeping her bowels regulated. During the past few years she had undergone several forced miscarriages and following one or two of these she had a high temperature with much tenderness in the abdomen and had since constantly suffered from pain in her right side. I took the case to be a pus tube and two or three days following I opened the abdomen and found a well defined carcinoma of the ileo-cecal coil with almost a complete obstruction of the valves.

This, I may add, almost overwhelming condition was disclosed in the absence of my regular assistant, whose presence was not considered necessary as the case was looked upon as only an ordinary pus tube. The assistants at hand were only those which constitute the operating room nurses but here was practically complete obstruction with a limitation of the involvement to an area covering the intestinal walls and not much beyond the ileocecal coil, rendering it a



case coming clearly within the demands of immediate resection. After a moment's hesitation I asked that preparation be hurriedly made for the excision operation. The anastomosis was effected by means of the Murphy button, end to side. The patient did well until after the lapse of three weeks, about the time of the discharge of the button,



when the abdomen commenced to swell, the temperature at the same time rising with much general disturbance. I introduced a probe through a stitch hole and upon withdrawing it learned that the leak causing all the trouble was from the bowel, i. e., fecal. On the next day (Sunday morning), under chloroform, I opened the belly by an incision along the outer edge of the rectus and found the condition such that my only recourse was to establish a fecal outlet upon the abdomen after a most thorough irrigation and manipulation of the adherent intestine. The temperature dropped now to almost normal. She began to take nourishment soon and did well for several weeks, during all of which time the fecal fistula was kept patent. At the end of the fourth month following the operation she began to develop general sepsis and in the tenth week after excision of the cecum the patient succumbed to exhaustion.

The second case was that of a boy sixteen years of age who came into my hands in the month of May last. He was not greatly emaciated although had lost about fifteen pounds in the last preceding

three months, but the muscles of his abdomen, limbs and face were round and firm, although he had been ill for three months, confined to the bed one month, and the preceding two constantly complaining. I found a temperature of 102, surface of the body dry and hot and a tumor mass lying centrally in the upper part of the belly, a little to the right of the umbilicus. The patient had been growing worse rapidly and he had from time to time passed small quantities of blood. His physician had been unable for several days to secure a satisfactory action of the bowels, although there had been much straining and distress. I took it to be a case of tuberculosis, perhaps of the omentum with disintegration of portions of the tumor mass and possibly inflammatory entanglement of the bowels.

I opened his abdomen and found a solid tumor encompassing the entire ileocecal coil with many clusters of hydatids. These I scraped out, washed the belly with several pitchers of hot saline solution. I lifted the cecum from its fixed position but the patient's condition was so bad that further operative intervention could not be executed, so I filled the belly with the salt solution and closed it, but the patient died the following night.

The third case was that of a widely known lawyer, aged fifty. He came to me with his family physician with a diagnosis of simply indurated deeply situated lymph glands in the right side and these the patient wanted removed. The cause of the induration of these glands I was told, was due to a treatment which he formerly underwent and which consisted of the injection of goat's lymph into this region. This treatment extended over a period of several months and immediately following he was sure that a swelling resulted therefrom. He had complained only of moderate constipation, believing that his condition in this respect was no worse than the average man who is much confined to his office. His general appearance was that of a man in fairly good health, a well rounded belly and muscles firm, appetite good but he thought it full of vagaries. I noticed that his breath was quite foul and he said that one of his chief difficulties was the accumulation of gas in the bowels. He said he usually slept well, never took narcotics, never drank alcoholic stimulants, but formerly smoked cigars moderately. His weight was 170 at this time, normally it was 190.

He went to the hospital and the next day I opened the abdomen by a cut along the outer edge of the rectus on the right side and found for the third time in this short period a carcinoma of the cecum with a great number of these same little bladders which I have designated as hydatids, which were filled with a jell-like substance and to which I referred in case number two. I cleaned the belly thoroughly of these by irrigation and otherwise but upon examining the cecum more carefully and the ileum and colon, I found them to be quite free of obstruction. The infiltrated mass occupied the walls more especially

of the intestine. I pushed my finger through the ileocecal valves into the colon and believing there was no immediate danger of obstruction and finding no mass within the lumen of the gut, I considered it a case demanding delay before exposing the patient to the risks of a resection. I thought, from the conditions present as I found them that the patient would have at least a year before the cancerous growth would produce obstruction of the gut at this point. He left the hospital in two weeks and shortly thereafter wrote me as follows; it must be remembered the patient was operated upon early in July last:

July 31st.

Dear Doctor:

"I arrived home in good shape. The wound has entirely healed and I seem to be doing well. I gained four pounds the first week. My digestion is not as good as I would like but I think it improves as I grow stronger."

In the middle of August I left the city for a trip through old Mexico and a Chicago doctor learning of this patient's condition, suggested that a resection be made at once. On September 18th I received a letter from his son dated September 13th, as follows:

"My father was examined by both Drs. Murphy and Frank Billings today and both urge immediate operation. He will go to the Mercy Hospital tomorrow and will be operated upon Thursday morning."

I learned from the family physician that the belly was opened by Dr. Murphy but that a resection was not made, and in order to verify my judgment that a resection could be delayed for the reason that there was abundant lumen of the bowel still remaining, on the 16th of November or about one month after Dr. Murphy's operation, the family physician wrote me as follows:

"Yours of Tuesday duly received. As to the Judge's case I feel that I can advise little. He is feeling fine, digestion good, bowels in good condition, and weight now 185, fifteen pounds more than before you operated upon him and six more than when operated upon in September. He looks the picture of health and is working all the time now, at the office all day and reading and working at home in the evening. The astonishing thing to me is his general condition and his appearance."

The fourth case. This man, aged about fifty, came to me in August last with a diagnosis of Banti's disease, a tall man, complexion and skin sallow, feet slightly swollen and evidently a small quantity of free fluid in his belly cavity. He stated that his normal weight was 170 pounds, weight at this time standing 145 pounds. He had been ill since April, had not used tobacco but it was his habit to take one to four drinks of whisky daily prior to the time when he commenced to grow ill. There was a well defined tumor lying a little to the right of the median line, about opposite the umbilicus and extend-



ing up under the liver. There was no history of bowel obstruction. He said that he was inclined to be constipated always and for the relief of this was taking aperient water, a glass each morning, but that he experienced no special inconvenience from his bowels. I took it to be a case of greatly distended gall bladder. Upon opening the abdomen I not only found a cancerous mass surrounding the ileocecal coil but a hard and thickened condition of the colon extending up almost to the arch. The cecum and ascending colon were securely fixed in this mass of cancerous tissue and I at once decided upon an ileocolostomy. The patient did well immediately following this operation and at the end of the third week he commenced eating solids daily, which he kept up for a month, at the end of which time he tired of this form of food. During most of this time his bowels acted regularly. There were no special incidents in the progress of the case aside from that noted of the fecal circulation being carried on through the new route without apparent interruption, which was a great satisfaction to me. At the end of October he was suddenly overcome with a fainting spell. Soon following he became nauseated and vomited a quantity of black blood. The next day he passed blood from the bowel several times attended with distress. He died of exhaustion one week after this hemorrhage.

I wish to add, in concluding the report of this case, with some degree of emphasis, that at no time in the progress of the case were there symptoms which would tend to lead one to believe that the lumen of the bowel had been much impaired at any point.

This series of cases was operated upon at the Missouri Baptist Sanitarium. The first case, as I have related above, was operated upon with the assistance of the nurses alone, an operation perhaps more formidable and trying than any other in all the category of surgical undertaking and was executed, I should say, as rapidly and satisfactorily as one could wish under the extraordinary circumstances. The special feature of this case as well as all the others, lies in a mistaken diagnosis. In each one of this series of cases the early diagnosis proved at the operation to be incorrect, although I may add that I suspected a possibility of malignancy in the third case, i. e., in the case of the Judge whose abdomen was again opened but this time by Dr. Murphy on September 14, 1905. The errors not only led me into trying situations, but in the first, second and fourth cases the abdomen was opened by an incision in the median line and this added materially to the embarrassments already encountered and made the task of manipulating for examination and in completing the operative work all the more trying. This was especially unfortunate in the first case, i. e., where I had to complete the resection and properly effect the anastomosis through an opening in the middle of the abdomen, which proved a most tedious and trying task, and, too, without the help of an assistant accustomed to the work.

*Diagnosis.*—Awhile ago I addressed a number of questions relating to the diagnosis and surgical treatment of cancer of the cecum to a number of surgeons and these replies with but a few exceptions would seem to convey the idea that it is necessary to find the presence of a tumor in that region before one may feel certain of cancer of the cecum. Senn's postulate would have us put much faith in the presence of an obstruction at the ileocecal juncture if malignancy is to be expected.

The Mayos, who have had perhaps more than an equal share of these cases, add that "the symptoms of malignant disease of the cecum are colicky pain, constipation alternating with diarrhoea and progressive wasting. The tumor may be felt in some cases. In the later stage intestinal peristalsis can be plainly seen through the attenuated abdominal wall and usually accomplished by marked gurgling."

Now, you may recall that Senn's essential symptom was not complained of in any of my cases, and whilst the Mayos show a most admirable record in the handling of these cases, this series of cases which I report could not have been correctly diagnosed by the symptoms they enumerate for the simple reason that the symptoms enumerated were not conspicuous and not recognized. Colicky, pains, constipation alternating with diarrhoea, visible peristalsis with gurgling, were not features in any of my cases.

No reference whatever is made by these surgeons to any difficulty experienced in the diagnosis of the cases reported, but since it is clear that the symptoms upon which diagnosis was made by them were not present in the series of cases which I am reporting, hence I conclude they could not be relied upon in a wide range of such cases.

*After thoughts.*—The visitation of after thoughts following in the wake of the review of this series of cases is necessarily attended with a certain degree of chagrin and with some feeling of regret. I have tried to make clear my diagnostic errors. These have been plainly acknowledged and if we must be true to ourselves and our own records this is not only a duty but demanded of us for the benefit of others. In my first case, as I have intimated, I had no thought of malignancy. The pus tube diagnosis appeared so plain and palpable that I was not at all apprehensive of the simple nature of the operation or as to its outcome. The presence of a malignant tumor in the abdomen of this cheerful looking woman never suggested itself to my mind. Among other things she said that she had been receiving treatment at the office of a specialist in gynecology, but following each office treatment she experienced so much pain from the gauze packing that she was compelled to remain at home much against her wishes and pleasure. In order to have a change of treatment she was urged by her brother-in-law to consult me with a view to determining, among other things, if it was necessary to continue that treatment which she was receiving and which she thought unnecessarily painful. She had

sustained a loss of flesh, it is true, but she wished me to understand that this was in a measure due to the suffering entailed by the local treatment—she was undergoing at the hands of the specialists and that, too, when she would recover from these she was going day and night in the performance of certain social functions and did not give herself time to recuperate. So you can in a measure imagine the extent of my discomfort upon opening the abdomen and finding this mass involving the ileocecal coil, which I now show you. You can see the hyperplastic mass of cancerous tissue projecting into the cecum and colon, producing a condition apparently of absolute mechanical obstruction (specimen exhibited). The operation of excision and approximation was completed rather hurriedly, but still I have much faith in the belief that she would have completely recovered from the immediate operation and the fecal circulation, reestablishment had there been no defect left following the separation of the button from the anastomotic union. No doubt intestinal peristalsis is more active at this point in certain stages of the reparative process. This is altogether likely when a foreign substance is present like the Murphy button, and this intensified intestinal force may have had something to do with such a serious and unfortunate consequence.

The laparotomy was made on the boy with the hope of relieving him of a sac of pus. There was no thought suggested of malignancy before this was undertaken. The subsequent diagnosis was based upon the condition of the cecum and colon, which we found to be smooth, greatly swollen, hard and infiltrated, no pus present, but clinging to the cecum were many clusters of hydatids. Their significance, however, I am unable to explain. The small intestine for a considerable distance from the ileocecal valve, was distended, indicating obstruction at the juncture.

The astonishment excited by the examination of the cecum in the third case after its exposure was quite as great as that experienced in the first case. Here I found no indurated glands at all, the things for which we were seeking, but instead a greatly enlarged cecum with many hydatids lying about it, the head of the colon hard and infiltrated, but the small intestine empty. Upon invaginating the small intestine by means of my finger, I could readily see that the lumen of the valves and the colon above were not impaired, and I immediately decided to go no further than to lift up and liberate the cecum, clear the belly of the hydatids, wash him out with hot salt solution and close the belly. The wisdom of this course was, I believe, fully justified by the subsequent history of the case.

Pondering over this subject in general it must be confessed that errors of the character described will be made, and all surgical procedures instituted with the view of curing this disease will carry with them many grievous disappointments until, at least, the cause of the disease is clearly revealed. This and this alone will furnish a scien-



tific basis for the proper treatment of cancer cases. But while the etiologic influences of this relentless foe still remain strangely mysterious to us, we are in possession of the knowledge in regard to its nature that there is no natural immunity against its invasion, or ability of the human body to throw off or rid itself of cancerous resistance to malignancy and a spontaneous cure never takes place. We know that the disease is merciless in its war against the life of the patient, and never for a moment is there any relaxation in its irresistible activities to destroy life. Its victim must perish before its work is ended. There are many cases of cancer presenting *nolimetangeres* to surgery and, indeed, I believe with Watson Cheyne that there are no good grounds for over enthusiasm as to the result of any surgical procedure in malignant disease, and this may suggest the question, will surgery ever prove a scientific remedy for the cure of cancer? No one, of course, in the light of present knowledge, can answer, for when the real cause of cancer is discovered, then, presumably, some certain form of blood examination will disclose the diagnosis, and with the discovery of the etiologic influences doubtless the scientific remedy will suggest itself, just as it was in diphtheria, a disease which, but a few years ago in nearly every instance destroyed its victim save by the intervention of surgery. Now surgery has no place in the curative treatment of diphtheria.

Surgeons become over-zealous every now and then, as history is being made by our profession. Reports are sent out from various sources conveying the impression that this or that surgical procedure in certain anatomical localities of cancer will cure the case beyond a question of doubt. The profession, as a rule, is too much inclined to champion and follow a routine practice. Enthusiastic followers of certain popular authors are too frequently led to advocate and practice extreme surgical measures without due regard to the study of causation or the limitations of legitimate surgical possibilities.

I believe the number of resections of the cecum to date all told will not greatly exceed one hundred. I take it that in each instance the procedure was resorted to for the relief of malignant obstruction at or in the region of the ileocecal juncture. We must in the present light of our knowledge limit surgical intervention to the absolute demand of reestablishing fecal circulation only. It appears to me that a surgeon is not justified in exposing the patient to the risks of a resection (for this alone has a serious mortality) save for the object indicated. If the lumen of the ileocecal coil is not seriously impaired when the patient applies for treatment, then its resection must be delayed. Of course it is not always possible to ascertain if there exists marked obstructive infiltration until disclosed by the exposure of the parts.

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## DISCUSSION.

Dr. C. Lester Hall, Kansas City:—This very excellent and able paper of Dr. Broome's and the conclusions arrived at by him must be accepted by us all in the main. I presume you are all quite familiar with the very recent paper of Nicholas Senn, in which he makes a plea to the profession at large to try to study carcinoma and endeavor to arrive at a knowledge of the etiology of the disease. Most assuredly pathology has failed to give us etiological facts to guide us. So long as we are in doubt as to the etiology of the disease, so long will it mystify us and our efforts be of little avail. More people die of cancer than die of appendicitis; more die of cancer of the stomach than of cancer of the breast by three to one; more die of cancer of the breast than of the uterus in the proportion of two to one. The difficulty of making the diagnosis of cancer of the stomach is recognized by all who deal with it. A remarkable thing and a good thing for the old, is, that they endure cancerous growths better than the young. Therefore it might be a guide to us in very old people not to interfere with them in a surgical way, whereas in the young something must be done and done early, because the tissues are active and the disease progresses more rapidly. Radium and the serums have been suggested as remedies. One investigator noticed that when there was a metastasis the spleen was the last organ involved, and in some cases where all the other organs were involved the spleen was not involved at all, so he thought that an extract from the structures of the spleen could be used with benefit, but proof is wanted.

The use of radium and the x-ray has been nugatory in the main. In the use of radium we have had cases that are encouraging and x-ray seems to do some good in skin carcinoma, but today not only is the surgeon disappointed in his efforts to cure the disease by operative measures, but all procedures have practically proven to be in vain. I knew of one case in which there were two tumors of the ovaries, one twenty and one three pounds. She got well apparently with a positive assurance to the friends on my part, that it would not return. The x-ray was used persistently, but with entirely negative results. What are we to do? We are confronted with an increasing disease. We can not all become Eskimos, who are said to be immune to cancer; we can not all live in that cold country. We have a disease that is decimating the land. It is on the increase. The doctor speaks of the limitation of surgery. We must admit that it has its limitations but when we reflect that we can perhaps do as much as we can do with any other procedure, when the bacteriologist, the pathologist, when the serums and the x-rays have failed us, then we have nothing else left but surgery. We must fight it. The fact that we have reported by Dr. Broome and others that lives have been prolonged for years justifies the hope that we do some good. I assisted a skillful surgeon in our city some years ago in removing a uterine cancer in which the cancerous process was not larger than the end of my finger. The patient recovered and for four years had no return. Then she had a recurrence in the lymphatics of the pelvis, and died, as so many others do; but we had contributed four years to her life and to her happiness. We cannot rely upon the hydrochloric acid theory alone. Last June I saw Mayo remove the whole half of the stomach including the pylorus, and the poor man who was suffering intensely, in a week or so was comfortable, hopeful and happy. At last report he was living. When we see such work and there is no other hope to be held out to us, there is nothing else we can do but continue our effort to relieve by surgery. In making the diagnosis we have the benefit of exploratory incision, which is entirely justifiable. We should in all these cases employ it more frequently than we have in the past. There is no difficulty

attending it and little harm results from its employment. We are confronted by this enemy of humanity and surgery must continue to do its best, little as it may be, for the relief of these sufferers.

Dr. O. B. Campbell, St. Joseph:—In listening to Dr. Broome's paper I would infer that he questions the advisability of operative procedures in carcinoma, basing his position upon his personal experience, and the mortality statistics from this disease. There are two positions that are now quite well established concerning carcinoma, namely, that it is a local disease to begin with, and that early radical removal offers the best opportunity for cure; that it is imperative to make an early diagnosis in carcinoma affecting any organ or portion of the body, and that it is just as imperative to operate and radically remove the disease at as early a date as possible after the diagnosis is made.

The doctor has failed to make clear to me substantial reasons for failure to make a diagnosis in some of the cases he has mentioned. It would seem from reports he has given, that his case died from sepsis rather than from a failure to remove all cancerous growth, or from the shock incident to the surgical procedure. I do not believe the results obtained in the cases operated upon by the essayist should influence early surgical procedure for the cure of carcinoma. It is true that the general mortality in carcinoma should be lessened by improvements in diagnostic methods, and resort to early operation.

Dr. J. D. Seba, Bland: In regard to diagnosis of these conditions. If the tumor is in the pylorus and you can feel it, it is comparatively easy, but when it is in any other part of the body it has been hard for me to diagnose. As to the mode of treatment, I have found only three remedies of value. First is morphine. I have a case now under treatment. We commenced with a quarter grain and now have gotten up to a grain and half. It seems to produce sleep, rest and in some mysterious way prolongs life. The second is that good drug strychnia. We commenced with a sixtieth of a grain and run it down to one-tenth hypodermically. The third remedy was one that we used in a case where the cancer involved the liver and produced dropsy. And, this we treated with spartein sulphate, also hypodermically administered. We have administered it in one grain doses and it always has a direct effect on the edema of the legs. Outside of that we have tried every thing else with no results.

Dr. Dorsett, St. Louis:—In regard to the use of the x-ray. I do not believe that we should eliminate the x-ray in the treatment of carcinoma. That it is applicable to cancer of the uterus I do not believe. That it is applicable to cancer of the breast I do believe. I have had some experience with it in the treatment of the cancer of the breast. In one case the tumor was four inches long and two inches wide when discovered by me. It decreased under the treatment until it was about the size of a walnut. Prior to the treatment use of the arm had been lost. Since the treatment use of the arm has been regained and it has remained perfect without pain. After three years the tumor suppurated and was then removed. The patient is now comfortable. I believe that one of the reasons why surgery of the uterus does not progress more is set forth in the statement made by Lawson Tait, that has had its influence all over this wide country, and that is: "That above all the diseases that flesh is heir to, cancer of the uterus is the most painful." The consequence is that the general practitioner does not look for cancer until the patient complains of pain. When that time comes, it is too late. I maintain that all women when they approach the menopause ought to go to a physician for an examination. This peculiar hemorrhage at the change of life is not always due to the menopause. There are other rea-



sons for this hemorrhage. Possibly a fibroid. Possibly and probably a cancer.

It is a well known fact that persons past middle life have a great deal more to hope for from operative procedure if suffering from carcinoma than would a younger person; especially is this true of carcinoma of the breast. We also know that cancer of the body of the uterus is not like cancer of the neck of the uterus. There is a great deal more of promise in cancer of the body of the uterus than in cancer of the neck of the uterus, because of the greater lymphatic circulation around the neck. I have four cases that have passed five years and one seven years in which I removed the uterus for cancer of the neck of the uterus, going up as high as the internal os. I have one case that is of particular interest so far as prognosis is concerned. After the operation I told the attending physician there was no hope of a cure and advised him to take her home as soon as she was able to leave the hospital and make her as comfortable as possible with morphine as she could not live three months. Six years afterward the physician informed me that she was well and hearty and a letter received from her recently confirmed this information. This uterus was badly diseased and was literally shelled out of the broad ligaments. I can explain this remarkable result only by saying that I was fortunate in getting out all the diseased structure.

Dr. Morfit, of St. Louis: I would like to ask Dr. Dorsett, if in the case he refers to a microscopic examination was made.

Dr. Dorsett: No microscopic examination was made until after the tumor was removed. The x-rays were applied for some time. Once or twice a week and then three times a week for about two years. It was removed when it had shrivelled to about the size of a walnut. It was shown to be malignant. There has been a slight recurrence, but the patient is comfortable so far. She is eighty-one years old.

Dr. Broome, in closing: I have nothing of special moment to add only that I would like to ask the gentleman who criticised the diagnosis of the several cases to be kind enough to read the paper when published. I will say that the paper is simply intended as an appeal to the profession to abandon extreme and harmful palliative measures in cancer cures; that is to abandon useless heroic operations for palliative procedures. Surgical heroism in cancer can only prove hurtful in all its aspects.

## SYPHILIS OF THE NERVOUS SYSTEM.\*

BY CALVIN J. MORROW, M. D., KANSAS CITY, MO.

While there is no part of the body which escapes the ravages of syphilis, still the nervous system seems to be peculiarly susceptible to this disease. Its function is always more or less disturbed, depending, of course, on the virulency of the affection. However, it is in those cases where we have some marked lesion that we designate the affection "Syphilis of the Nervous System."

The symptoms are so manifold that it becomes hard to classify the trouble at all, and so many times we must take so much for granted, not being able to verify our opinions by postmortem, that the majority of our syphilographers, writing upon the subject, have done so apologetically.

It is not my purpose to take up the many different conditions which will produce derangement of the nervous system, but to bring the matter before you in a general way for discussion. The simplest division I can give in discussing syphilis of the nervous system is to divide it first into recent and late affections, or true syphilitic and parasyphilitic lesions, or the constructive and destructive lesions. Syphilis of the nervous system appearing within the first three or four years after infection, I would call true syphilis of the nervous system. It is due to the active agency of the syphilitic germ, causing pathological changes of some kind in the body, no matter where the location. These lesions, I might say, are almost always of a constructive variety. But those lesions which appear years after the primary affection, and after there has been a period of several years of comparative health, are usually of a destructive variety, and not due to the true syphilitic poison, but from a parasyphilitic poison, and as yet no one has thoroughly demonstrated its character, but I believe its true nature will be ascertained in the near future. These I would class under the head of latent, parasyphilitic or destructive causes. Why I make this division will be explained a little later on. Let us examine for a few moments, some of the conditions which we find producing these troubles.

*Susceptibility.*—Mauiac has said in discussing the susceptibility of these diseases "that it attacks certain people because forsooth, it pleases it to do so." However, from my observations, I am convinced that there are a certain class of sandy complexioned and neurotic patients that are more prone to have nervous symptoms than the brunette or dark-skinned, phlegmatic class.

*Time of Appearance.*—Affections of the Nervous system due to the true syphilitic virus are more likely to occur within the first year or eighteen months of the disease, though they may develop at any time

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\*Read by title at the annual meeting, Jefferson City, May, 1906.

during the secondary stage. Syphilitic processes are more often found on the surface of the brain and meninges, and not in the deep cerebral substances, which, of course, is a valuable diagnostic guide.

Degeneration of the arteries, whether caused by syphilis direct, or by proximity of syphilitic lesions, is a most important factor in the cerebropathies of syphilis, particularly in regard to softening and hemorrhage. If syphilis attacks the bones of the skull, you may have symptoms, either by direct infection, or mechanical compression, caused by gummata, or presence of pressure of pus between bones and duramater. Gummata, on either side of the duramater, will give its characteristic symptoms from pressure.

Syphilis may attack the brain in any of the following ways: First, by diffused gummatus infiltration of the meninges, with extension to the brain substance. Second, gummata, or circumscribed tumors. Third, endarteritis, with its concomitant brain lesions.

*Symptoms.*—The symptoms are varied in the extreme. Neuralgias are the most common symptoms, affecting the fifth pair of nerves during the secondary stage. However, a much more valuable symptom is the motor disturbances, which, if not prevented by treatment, are almost sure to appear either in the form of paralysis or paresis.

The neuralgic symptoms are always characterized by the usually increased and intense nocturnal pains, the patient being frequently free from pain during the day and suffering intensely at night. Even in mild cases, the pain is less bearable than the ordinary headache. It harasses the sufferers, making them morose, excitable and sleepless, and interferes with general nutrition. But, as I stated in the beginning of my paper, that it was not my purpose to take up in detail the many different lesions causing derangement of the nervous system, but to call special attention to a few of the many varieties of the affection and discuss the best methods of treatment. It has been my fortune or misfortune to see quite a number of these cases in the last two years and the only methods given by all the text books in treatment were the administration of mercury and iodides. My experiences recently have taught me that those cases arising from a constructive derangement can be, and are, relieved by the administration of mercury and iodides, but those caused by a destructive process, of which tabes dorsalis is a marked example, are not cured or even benefitted by this treatment. To illustrate my point let me give you briefly the history of three very widely different cases which have come under my observation in the last 18 months.

*Case No. 1.*—Young man, 30 years of age, single, traveling salesman, contracted true chancre June, 1904. He was a brunette but of highly nervous temperament, not a drinking man, but would occasionally get on a spree to be social with the boys. I put him on the usual treatment and he was doing fine until October, or about five months after infection, while in Minneapolis, he said he felt nervous and thought a little champagne would help him. He commenced to drink cham-



pagne and did not drink anything else. After a few days he wound up in some town in Iowa, in jail. They adjudged him insane and sent him to the state asylum. He was kept there until the following May, or about six and a half months, when he again came under my charge, very nervous and emaciated, but perfectly sane. Since that time he has been under my care, and is apparently all right again, except a little nervous. Diagnosis.—Syphilitic, sub-acute meningitis, super-induced by alcohol.

*Case No. 2.*—Woman, 38 years of age, married, no children, weight 170 lbs. Had had syphilis 15 years previous but had no symptoms and had been in apparent good health for 11 or 12 years. First noticed that she was forgetful of the most common household duties. After four or five months these symptoms became more marked; she grew morose and erratic and would run away from home and stay out for hours, giving no cause and in fact not knowing where she had been herself. I sent her to the asylum; she gradually grew worse, becoming emaciated, losing all her flesh and finally died in the asylum. No paralysis or paresis in this case. Diagnosis.—Syphilitic softening of the brain.

*Case No. 3.*—Male, age 46, single, blonde or sandy complexion, contracted syphilis, February, 1887. Had the disease quite severely, but after about four years had noticed no symptoms until three years ago, when nervous system began to break down. Could not sleep, irritable, slight duties worried him. In fact all the symptoms of a nervous break-down. At night he would not sleep more than an hour or two when he would be awakened by a contraction of the muscles of the leg, compelling him to get up and walk about the room, or have them rubbed. No lesions anywhere that can be discovered, in fact has been in good health for over 15 years, or since the subsidence of the syphilitic symptoms. Diagnosis.—Syphilis of the Nervous system.

Now what I want to call your attention to is the fact that these last two cases are not syphilis at all, any more than the paralysis, six weeks or two months after a child has recovered from diphtheria is caused by the diphtheritic poison: we say in such a case it is the ptomaines left in the system which affects the nervous system. So in these cases of nervous affections following syphilis many years after the primary lesion. They are not due to the syphilitic germ, but a parasyphilitic something which, as yet, we have not isolated. In the first case reported, we have a direct effect of the syphilitic poison on the meninges of the brain, causing insanity, or a constructive process, so to speak. This case is amenable to the anti-syphilitic treatment, but in case No. 2 it is not the active agency of syphilis, but the deleterious ptomaines left in the system, causing the brain tissues to break down. Such a case is not benefited by mercury and iodides and this is true in case No. 3. In such cases as No. 3, I do not depend at all on the mercury and iodide, but give the patient strychnine, arsenic, gold, and if anemic, iron, and out-of-door exercises and sunshine, and in fact all the natural tonics of which we know.

## APPENDICITIS.\*

BY C. G. GEIGER, M. D., ST. JOSEPH, MO.

Appendicitis has been the most important disease to the physician and surgeon for the past few years; and the anatomical characteristics of the different varieties of appendicitis, together with the secondary lesions accompanying the primary appendiceal inflammation have been described, and abundant statistics dealing with the relative frequency of the different types of appendiceal and peri-appendiceal lesions, exist.

In spite of all this accumulative knowledge, the subject of the etiology and pathology of appendicitis is not by any means a closed chapter. Fitz, in his classical paper in 1886, first outlined the pathology of this disease; however, long before this, the profession knew that there was a disease in, or around, the head of the colon, that had a large mortality. Even the Ancients recognized a fatal swelling in the right inguinal region.

It was in the sixteenth century that the appendix was first recognized anatomically. Beginning in the early half of the nineteenth century, saw an increased interest in this much-talked-of-disease. Fitz's statements, based on thorough post-mortem study, revealed the fact that many cases of peritonitis had their origin in the appendix and he gave us a foundation for sound pathology.

Much knowledge has been gained since this by ante-mortem examinations of the healthy and diseased appendices. About 1897-'98 much of the pathology found in the lower right abdominal quadrant, previously termed "typhlitis," and "perityphlitis," now changed its name to "appendicitis." It was not until this date that appendicitis was considered a surgical disease.

Notwithstanding the majority of cases are first seen by the general practitioner and therefore the safety of the case depends upon the wise co-operation of the physician and surgeon. The lowering of the present mortality depends on getting those men who see a few cases each year to recognize appendicitis early, to appreciate the pathology, and to recommend the proper treatment, and urge that it be carried out. This can best be done by the general practitioner taking enough interest in his cases to follow them into the operating room. A more ready appreciation of the conditions in his next case will be accomplished in this way.

Considerable reliance should be placed on a group of three almost pathognomonic symptoms: First, presence or history of pain, not produced by pressure. Second, tenderness elicited by pressure at a fixed point or area, not necessarily McBurney's point, within the right ab-

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\*Read at the annual meeting, Jefferson City, May 1906.

dominal quadrant. Third, more or less lower right rectus rigidity in obedience to the rule, that over-lying muscles attempt to protect under-lying tenderness, by increased tonicity. Little reliance should be placed on temperature or pulse, for you may have actual or impending perforation with these symptoms nearly normal. I wish to emphasize, never regard lightly an acute abdominal colic, no matter how much the early symptoms may suggest an early attack of ordinary indigestion. Watch such a case closely for a matter of twenty-four or forty-eight hours, to make sure whether or not localized pain and tenderness in the lower right quadrant, may reveal an appendicitis. In every sudden abdominal pain the probability of an appendicitis should be borne in mind, and no other diagnosis considered until this disease can be definitely excluded. However, in infancy, abdominal pain is of such common occurrence, that an appendiceal colic is very apt to go unrecognized. This is especially true in the first year of infancy and in cases where comparatively mild local symptoms are certainly rarely diagnosticated.

If the process goes on to abscess formation, then the condition is more readily discovered, if the possibility of an appendicitis is not forgotten. Lack of common sense and ordinary intelligence in eliciting the history of the attack, or the negligence of the only instrument of any service in the diagnosis of this disease, the palpating hand of the practitioner, is responsible for much of the mortality.

With a nearly unanimous agreement among experienced surgeons that operation is indicated in the early hours of the attack, the great importance of prompt diagnosis can be clearly perceived. The failure to make an early diagnosis of acute appendicitis, as before stated, is responsible for most of the factors entering into the mortality of the disease.

One of the greatest fallacies that has ever been propagated to account for appendiceal symptoms, is rheumatism. Having had considerable experience with appendicitis, I have always found true appendiceal symptoms to be due to a diseased appendix, in every case, even where rheumatism has been held responsible for the symptom-complex prior to operation. I believe it is now recognized by the profession that we may have an ulcerative or necrotic perforation of the appendix without any symptoms of any consequence until after the perforation has taken place. I can call to mind three fulminating cases that came under my observation, and were operated upon within twenty-four hours from the time of the onset of the symptom, and at this early date each case had a well developed general peritonitis, the abdomen partially filled with sero-purulent fluid; bowels glued together with an inflammatory exudate. There is no doubt in my mind that the great pain or sudden onset was the result of the rupture of the appendix in these three cases. We can have an ulcer of the stom-



ach with little or no pain; perforation, however, is followed with great pain and virulent peritonitis.

I believe the severe pain in appendicitis is caused by the irritation extending from the inflamed appendix to the ileo-cecal valve. The ileo-cecal valve at once, by irritation, closes, thus aggravating the paristalsis of the bowels, thus causing increased motion of the inflamed part which produced pain. We know by starving a patient, after thoroughly performing lavage, or thoroughly relieving the stomach of its contents, our patient will be comparatively relieved. So it was advised by Ochsner, that the above directions be carried out in certain cases, in other words, putting the bowels thoroughly at rest, relieves the patient.

It would be impossible for necrosis or ulceration, to develop and cause perforation, with all the pathology found in these cases, in the peritoneal cavity, within the short space of time—twenty-four hours. As a rule, we do not have peritonitis so thoroughly developed in so short a time following the initial symptoms of appendicitis. The infection, or the germ causing the inflammation, doubtless must have been the streptococcus pyogenes, which grows very rapidly under certain conditions. Each of these cases was almost in a moribund state when operated upon.

I believe if we could have reached these cases within a couple of hours after the perforation, that surgical interference would have done much good. But later, in all such cases, all the surgeon will be able to do is to increase his mortality list. Howard Kelly struck the keynote when he said that every case of appendicitis is peculiar to itself.

We find some surgeons of considerable prominence classifying the pathology of appendicitis according to the number of days it has existed. *This can be applied to mild cases only*, as I have known of a number of cases of appendicitis that have died without operation on the third or fourth day; other cases exist for weeks with but little pathology.

From a practical standpoint, treatment resolves itself into the early and late. These terms cannot be expressed in hours or in days. No doubt some of us have seen instances where twenty-four hours, yes, perhaps twelve hours, after the inception of symptoms, meant late treatment: and others, where at the end of several days the treatment might still be early.

Strictly speaking, presence or absence of complication constitutes the dividing line between early and late treatment. Previous to complication, the situation, from the view-point of treatment, is early; afterwards it is late. Of course there are degrees in consequence constituting late, quite late, and very late. According as there is perforation, we limit adhesions, small abscesses, extending peritonitis, and general septic peritonitis, with perhaps distant lesions in the lung, heart, parotid or cerebral blood channels.

Those of us who have treated complicated appendicitis by prompt operation with many good results, argue that a septic focus in the abdomen, whether large or small, should be attacked, cleansed, and drained, just as elsewhere, in order to prevent continuing or increasing sepsis with the usual termination.

The appendix has been cut off, tucked in, turned inside out; the patient has been purged, narcotized, packed in ice, or packed in poultices. He has been starved or instructed to walk on all-fours. Leucocytes have been gazed on through the barrel of the microscope, they have tested for glycogen, and the urine has been assiduously examined for indican, acetone or albumen, and with all these examinations, an inflamed little eight by one centimeter organ has doomed thousands of suffering humanity to an early and untimely grave.

My experience with about three hundred and fifty cases has taught me that there are conditions under which we should not operate for appendicitis. Our extreme practices have resulted in good to our fellow men, because we have learned that appendicitis, as in most things, there is a happy medium.

There are still a few exponents of this operative extreme; but they are condemned by their own statistics and their own discussions. Surgery deals with human life and it can not be done by fixed rules, and we should exercise reason and judgment in every case. We should base our opinion on the condition found in each case, on our own experience, and on the experience of others. There are still a few physicians who tell their patients, after an acute attack of appendicitis, that they are well and need no operation. How they can do this conscientiously, is beyond comprehension, because they know that the majority of their patients do have recurrences, and some of them with fatal results; still, on the other hand, the surgeon and physician agree that all cases of chronic appendicitis should be operated on.

The interim operation, by experienced surgeons, is almost without mortality. Many surgeons of large experience, can show an unbroken record. Because the interval operation is so safe, it does not follow that it is always safe to wait for it, for the patient may die before reaching that period. It has been very aptly said that an interval operation is a good thing to recommend in an interval.

I wish to call particular attention to the fact that many people suffer from chronic appendicitis who never had an acute attack. These patients as stated before should all be operated upon, because the operation is perfectly safe, and they are almost sure, sooner or later, to suffer from an acute attack, with all its attending dangers. It is hardly necessary to say that when a localized abscess is found, an operation is always indicated.

Treatment of the stump is of no little importance, and the most simple, I have found to be the best. After ligating the meso-ap-

pendix with a No. 1, ten-day chromicized cat-gut, after producing pressure with a hemostate, I ligate the appendix almost flush with the colon, with a No. 1, ten-day chromicized cat-gut. I now divide the serous covering of the appendix about one half of an inch from the ligature, dissecting it down about a quarter of an inch, and then amputate the appendix. Now applying carbolic acid to the stump, after washing freely with alcohol, I bring the cuff of serous covering up over the stump and put in a couple of stitches of plain sterilized No. 0 catgut.

The invagination method which has been generally practiced has two serious objections: First, the time that is taken, second, the liability of intramural abscesses following such treatment.

The method used in closing the abdomen means much to the future welfare of the patient, whether we use the gridiron incision or cut directly through the muscle fibres. In closing the peritoneum, I use a No. 1, five-day chromicized cat-gut, continuous suture, locking every third or fourth suture. I believe it is well to sew the muscle fibers together, for if we do not we leave a cavity which will fill with serum, and infection is more liable to take place. After bringing the muscle fiber together, I lap the muscle sheath at least half an inch, using the mattress to hold the sheath together; this is most important in closing the abdomen. In closing the skin I use cat-gut, continuous, or silk worm-gut, interrupted suture. If this method is carried out in detail, there will be no trouble with hernia following abdominal operation.

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## SOME LESS FREQUENT COMPLICATIONS OF FIBROIDS OF THE UTERUS.\*

BY ERNST JONAS, M. D., OF ST. LOUIS.

The specimens I am to present to you to-night belong to the class of fibroids of the uterus. From the number of fibroids, removed by Dr. Tuholske and myself during the last year, I have selected a few which seem to me of especial interest and offer important points for discussion.

Whoever operates frequently for myoma of the uterus will find the complication with cystic degeneration of the ovaries or with hydro- and pyosalpinx most common, and I shall leave the consideration of this complication aside.

The first two specimens illustrate fibroid conditions of the uterus complicated with pregnancy.

Specimen No. 1 shows a uterus containing a fetus about three months old—the uterus itself the size of a normal uterus three months

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\*Read before the St. Louis Obstetrical and Gynecological Society April 12, 1906.



pregnant. Growing from the posterior wall is a fibroid the size of a cocoanut. Uterus and tumor filled the pelvis and gave marked signs of incarceration. Ischuria paradoxa and pressure on the rectum were very marked. The findings on palpation were typically those of retroflexio uteri gravidi incarcerati. The neck of the uterus pressed against the anterior wall of the vagina and bladder, the soft corpus of the uterus and the hard fibroma filling the pelvis completely and producing the above symptoms of incarceration. Although we know well, that as pregnancy advances, many a retroflected pregnant uterus is gradually lifted out of the pelvis by nature and brought into normal ante flexion, it was not thought permissible to wait for this possible occurrence because of the danger of complete incarceration. We decided to try the replacement under deep narcosis and after futile attempts, performed a laparotomy, succeeding with great difficulty in raising the uterus and tumor out of the pelvis. Having accomplished this much, we had to choose whether to allow the pregnancy to go on and perhaps remove the myoma after the confinement; or to enucleate the tumor, risking abortion; or to remove tumor and pregnant uterus then and there. The patient was a mother of eight children and immediate removal of uterus and tumor was decided upon. Patient had a good recovery.

Specimen No. 2 is a uterus two and a half months pregnant—with multiple fibromate. The patient, 38 years old, had been married just four months and presented herself at the office mainly to find out if she was pregnant. She complained of intense pain in the lower abdomen. The diagnosis of pregnancy complicated with multiple fibroids was easily made. The choice of the proper course was difficult: To produce an abortion and operate later on for the fibroids; or not to interfere at all until after pregnancy and puerperium; or to operate toward the end of pregnancy with the hope of saving the child; or to operate at once and remove either the tumors only or the tumors and uterus. The pros and cons were discussed and explained to the patient and her husband. Immediate operation was decided on aiming to save the uterus, if the location of the tumors would permit. The presence of the myomatous nuclei in the uterus, however, made the removal of the uterus necessary.

Want of contraction of the uterus in abortion or confinement and torsion of the pedicle of myomata, especially in puerperium, or necrosis of myoma are the main dangers of myoma during pregnancy, confinement, and puerperium.

Specimen No. 3 presents a sub-mucous myoma partly gangrenous, attached to the inverted body of the uterus. I shall give the history of the case in brief.

A woman thirty years old, married four weeks, presented herself at the office, complaining of profuse discharge from the vagina and

constant pain in the lower abdomen during several months past. Pain was said to be unbearable at the menstrual time. Menses quite profuse. After having postponed the wedding several times, patient had married four weeks before coming to us. Status presens: Patient very anemic, hardly able to walk. Temperature 102; pulse 120; chilly sensations. Distinct systolic murmur, diastolic sound not quite clear. Upon vaginal examination profuse muco-purulent hemorrhagic discharge noticeable. The whole vagina filled by a necrotic, foul tumor, forming a complete barrier. In deep narcosis it was very evident that the uterus was in the state of inversion. The funnel produced by the inversion of the uterus was very distinct, the necrotic tumor apparently in broad connection with the inverted uterus. Only after making a Schuchardt incision and after great effort (forceps) the upper end of the tumor and the inverted body of the uterus were reached. The submucous myom is attached with a broad basis to the body of the uterus. The myom revealed the characteristic colors and consistency of the necrotic state; the mucous membrane of the uterus had lost its mucous appearance and was partly covered with greenish-greyish membranes. Under these conditions it did not seem advisable to enucleate the myoma and attempt reinversion of the uterus with possibly other myom-nuclei; it was considered best to remove tumor and inverted uterus. Since the lips of the neck of the uterus could not be reached, the inverted uterus was amputated high up beyond the visibly infected area. Sewing of the anterior to the posterior wall of the uterus and drainage through the posterior cul-de-sac completed the operation. Patient improved after the operation, but died suddenly on the eleventh day after the operation of hemorrhagic infarct of the right lung.

It may not be amiss to call attention here to the fact that this necrotic condition of submucous fibroids is frequently mistaken for carcinoma. Not long ago I was called to see a patient who had been given up by her physician and consultant because of supposed inoperable cancerous condition of the cervix uteri. A pedicled polypus of the uterus producing terrific bleeding and consequent extreme feebleness in the patient was the whole trouble. Patient was cured by removal of polypus with the finger.

That polypi of the uterus may undergo cancerous degeneration is illustrated in specimen No. 4. The patient had been refused elsewhere as an inoperable case of cancer of the cervix. I found a polypus of the uterus in cancerous degeneration. After removal of the cancerous polypus, the uterine cavity felt entirely smooth. I considered it safer, however, to remove the uterus also. Patient operated on six months ago is to-day apparently in good health.

## DISCUSSION.

The President:—What was there about this case that caused them to think it was carcinoma of the cervix?

Dr. Jonas:—The polypus had become so soft and was connected with the cervix.

The President:—Was there much infiltration around the cervix?

Dr. Jonas:—No.

The President:—I understand that there was a diagnosis of inoperable carcinoma of the cervix. Why was it considered inoperable?

Dr. Jonas:—I did not see any reason except, perhaps, the far-gone condition within the cervix.

Dr. Frank Glasgow:—The polypus itself, then, was actually cancerous?

Dr. Jonas:—Yes.

Dr. Glasgow:—The specimens are unusually interesting, especially the one complicating pregnancy. It is in such cases that we sometimes have a great deal of trouble making out whether we have a pregnancy. There is no doubt that these tumors should have been removed. The woman could not have borne a child had these fibroids been allowed to remain. I recall a case of pregnancy of five months, with multiple fibroids and I took everything out. This case of inversion is interesting. Cases of inversion are not very frequent. This case probably occurred after labor. Of course it is hardly germane to fibroid, but this inversion may have been started by traction on the cord, and it probably took place slowly. I have amputated one inverted uterus; it is not a difficult thing to do, but with a tumor like that I would not like to attempt to do it. I think the cause of many cases of inversion is from the polypus pulling down the fundus. The fibroid uterus with polypi is interesting. I had one case in which the condition was much like that. I made a section through the base of the polypus and found the epithelial tissue growing upward, not downward, and on that finding only I told the patient I would not take out the uterus. That was seven years ago and the woman is still perfectly well. I can not say that had I gone into the body of the polypus I would not have found something like what the doctor found here. I recall one woman who was curetted for eight years. I did it once or twice myself. It was not cancer, but simply proliferation of the glands. The last time she came to me I took out the uterus and did not find cancer. There was an infiltration between the proliferated gland cells. The woman is now perfectly well after six or seven years. In that case there were no polypi at all. I had another case only a year or more ago. The tumor was sloughing, the temperature was 103.5° the day before I saw the patient. I examined a little piece and decided it was cancer, I took the uterus out and an abscess formed, but after that she got well and is perfectly well now. That epithelioma grew from a narrow space and the fundus of the uterus was not thickened at all. That was a case in an advanced stage of what we have here, except that it occurred in the fundus. The body of the mass was epitheliomatous but it did not extend into the tissues.

The President (To Dr. Glasgow):—In the case of polypus which turned out to be carcinomatous, did it extend down into the cervical canal?

Dr. Glasgow:—Yes.

Dr. F. J. Taussig:—Regarding the indication for operation in cases where myomata complicate pregnancy, I think these cases illustrate a number of points. In the first case the involvement of the uterus leaves little doubt as to the advisability of operation. In the second case such an involvement does not justify the removal of the uterus, but in this case the



operation of total hysterectomy was justified. In the first place, the myoma, which was pedicled, would have presented great danger. A tumor of that size would be very apt to cause trouble if the pregnancy were allowed to continue. Whether or not that tumor could have been enucleated is a question. Had it been possible to enucleate these two large tumors without causing too much trauma, the rest of the uterus might have been safely left.

The inverted uterus with myoma recalls to my mind an almost identical case which I saw in Vienna. The myoma was perhaps half the size of this one and the clinical history was similar. A necrotic, submucous fibroid had been expelled. About two-thirds of the whole mass was extruded from the vaginal outlet. A total vaginal hysterectomy was done without the tumor being at all in the way. The case was septic and the danger from that source following reinversion was so great that hysterectomy was preferable. It has been stated that if polypi that show carcinomatous degeneration are removed and a thorough curettement done, it is perfectly safe to leave the uterus. This has been shown in a number of cases where the uterus was found not to be involved, and a number of cases that had been followed up for years showed no return noted. Lately, however it has been shown that in several cases a carcinoma developed and was found to be inoperable. One such case seems sufficient ground to warrant a vaginal hysterectomy in all these cases. Where the carcinoma does not involve the cervix, vaginal hysterectomy has been found much safer and gives amply good results as to permanence of cure.

Dr. Oscar H. Elbrecht:—Discussing the case in which there was a degeneration of the fibroid in the vagina, I had a similar case in which the specimen was a little larger than this but presenting the same symptoms. The degeneration was so putrescent that the entire room was filled with the stench. Why this fibroid was not removed as one would remove a polyp, is the question that came up with me, but it filled the vagina so perfectly that you could not feel around it or see how much attachment there was. If I had felt sure there would not be a great deal of bleeding I might have removed it that way, but where the relations are disturbed by multiple fibroids we cannot reach them safely by the vaginal route. Mine was a fairly septic case but the patient was relieved at once, by the operation. If there are no complications above you can operate through the vagina but if complications exist above you cannot safely do so. The doctor was certainly justified in removing the uterus when he found the tumor was carcinomatous.

Dr. Taussig:—I know of an interesting case of vaginal hysterectomy. The assistant was pulling strongly on the cervix and everything was free except the parametrium. Suddenly it gave way and the entire uterus came away and they expected a terrific hemorrhage, but there was no bleeding whatever.

Dr. Charles Dixon:—The tearing off of a limb is followed by very little bleeding. I once saw a man in the hospital with his whole arm torn out and there was no bleeding to speak of. I think the pressure obliterates the blood vessels to a certain extent.

## MULTIPLE FIBROMYOMATA OF UTERUS WITH CYSTIC OVARIES; REMOVAL; RECOVERY; PRESENTATION OF SPECIMEN.\*

BY R. M. FUNKHOUSER, M. D., ST. LOUIS.

The fibromyomata still continues to be, and will always be, a subject of extreme interest to the surgeon. The theory of Recklinghausen like many others, that fibromata originate from remaining embryonic glandular substance is not sufficient to account for their presence, will soon become, if it has not already, a landmark in etiology, one more hypothesis that has not stood the test of research.

From the investigations of Bland-Sutton and others it would appear that their origin is intimately connected with the changes in the muscular coats of the vessels and their fibrous sheaths, which subsequently become fibroid, the cells being without nuclei, a view first suggested by Pilliet.

Disease of the heart, particularly fatty degeneration, is found in fibroids more frequently than can be accounted for by mere coincidence and it is not rare to meet with glycosuria (some times with diabetes), and also with albumin in this as well as in other uterine affections. In one case when hemiplegia occurred which was atypical and evanescent, simulating somewhat an hysterical type, the question arose was it due to toxic causes such as are present in uraemia, carcinoma, phthisis, etc. Cases of hemiplegia with fibroids have occurred with syphilitic history. Undoubtedly, repeated and excessive hemorrhages favor atheromatous or calcified changes in arteries. In both of the above cases the patients had suffered from a number of hemorrhages. Degenerations, malignant or suppurative, of the tumor are not infrequent; and all of us have seen cases of septic infection, as well as sarcomatous changes though I do not think the question of frequency of malignancy is as yet settled. I do not now recall having seen a case of carcinomatous change in a fibroid in my practice and I am inclined to think it is comparatively rare. It is not unusual to meet with hydrosalpinx, pyosalpinx, hæmatosalpinx, and other diseases of the adnexa in cases of fibroids. They may pass into different forms of degeneration such as fatty, colloid, myxomatous, suppurative and gangrenous, calcareous, all or most of these changes being found in single cases with cysts containing colloid, serum, blood pus, etc.

Fibroids are met with exceptionally, unless in the black race, un-

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\*Read before the St. Louis Obstetrical and Gynecological Society April 12, 1906.

der the age of 25 years though Cavaillon mentions a case occurring in a child of 13 years of age. Small multinodular subperitoneal fibroids in women of 40 years of age, or older, are least apt to grow. The submucous and intramural fibroids in younger women are most likely to develop and cause serious consequences. The idea that the cessation of growth occurs near or at menopause is incorrect; on the contrary frequently its presence is the cause of postponing it, and the earlier their removal the better.

Fibroids may be classified according to their pathological character and their situation, those of the body and those of the cervix, submucous, subperitoneal, intramural, pedunculated polypoid, etc. Those of the cervix are of peculiar interest. According to some authorities (Bland-Sutton) 5 per cent. of fibroids are situated in the cervix and are globular, which upon growing have a tendency to become ovoid and may be intracervical or submucous though a fewer number are situated at the periphery and become subserous; occasionally they may grow into the vagina. I have seen them develop from the vaginal portion of the cervix, after removal of the rest of the uterus. Those on the anterior part of the cervix are more or less globular and usually do not change the shape of the canal of the cervix very much and in two-thirds of the cases are solitary. A submucous fibroid of the posterior part of the cervix, on the contrary, changes the shape of the canal and though round at first, eventually becomes ovoid which is caused by the unyielding osseous boundaries, all varieties of the cervix having a capsule. It is interesting to note that the hemorrhage, menorrhagic or metrorrhagic, occurs only in the intracervical variety not depending, however, upon the size of the tumor, but where the organ has tried to expel or has expelled the fibroid, partly or wholly, into the vagina. Such a fibroid is apt to become septic.

The best treatment of fibroids is of course operative. The use of animal extracts, injections into the tumor and electricity, to effect a cure, is about obsolete. It is true electricity does relieve pain and controls the hemorrhage as a rule. The arrest of growth and cessation or modification of the symptoms, even without treatment, does occur, but is rare. When the patient refuses to be operated upon and when an operation is out of the question, other treatment may have to be substituted. The symptoms that call for operative interference are, excessive hemorrhage, adhesions, rapid growth, severe pain, septic or degenerative changes.

The hemorrhage seldom kills directly but indirectly and its effects upon the general health are most baneful.

The operative treatment may be divided into two main classes, viz., abdominal and vaginal; and these in turn, into different methods which have to do with the removal of the tumor, or part or whole of the organ, with the growth or growths. In the past and even now



the operation known as myomectomy has had many supporters, but I believe as the returns come in that it will become more and more limited on account of the dangers of hemorrhage and sepsis and the likelihood of the appearance of other fibroids later, the latter of which in my opinion, is by no means the least weighty of the reasons for its restriction, (this applies also to the removal by enucleation).

The selection of the route and method of operation will depend upon the case and the experience of the operator. Sometimes I have operated through the vagina, sometimes through the abdomen.

The question of leaving or removing the ovaries is not settled. There are many adherents of both procedures. Although it is wise to favor the conservation of an organ, it is not always easy to determine when this shall be done. Whether one or both ovaries be taken or left will depend on each individual case.

It must be borne in mind that failure or success will depend upon the heart and intestines and that causes of death are in the main due to heart failure and intestinal paralysis. Avoidance of handling the bowels, of chilling or of exposure of same, of loss of blood, the use of the Trendelenberg position during operation, and the saving of time, are factors in a successful outcome, together with the use of strychnine, the elevation of foot of bed and injections in bowels after operation.

#### DISCUSSION.

Dr. Glasgow:—The advantage in leaving the cervix sometimes overbalances the possibility of recurrence, and if it does recur it is easy to remove. I have a lot of patients with fibroids in them and they are pretty comfortable. One woman came to me eight years ago with a superitoneal fibroid. I told her to let it alone. She came to me again today. She has had no disturbance at all and she is now forty-two years of age. Menstruation lasts but two days, there is no discharge, she is not sick in any way. There is no difference in her condition except that she is a little bigger than she was. I told her to go home and if it causes her any trouble in any way to come back to me and I would remove it. I had recently a patient who was pregnant six months who came to me with a small fibroid high up which was causing her no trouble and I told her to go home. Dr. Carstens said that every case of fibroid should be operated on, and in proof of the danger of leaving them he cited a case of fibroid which after thirty years had been followed by malignant degeneration. If he had operated on that case thirty years ago in the beginning he would probably have used the intraperitoneal route and the woman would probably have been buried thirty years ago, or if he had used the extraperitoneal route she would doubtless have had a hernia during all those years, so I think she was much better off as she was. And so I warned this woman that if she had any pain she was to come back to me and I would take it out. If I operated on all the fibroids I find I would operate on five times as many as I do. If it is on the peritoneal surface you can safely let it alone. If it is down in the broad ligament it will certainly do harm and it should come out. If it is on the upper surface of the uterus and perfectly free in the abdominal cavity it is not doing any harm.

Dr. Elbrecht:—Did you find any tubal trouble?

Dr. Funkhouser:—No.

Dr. Elbrecht:—There is a point in this connection that has always interested me, that is intestinal adhesions. In almost every case where we have intestinal adhesions we will find the cause is some inflammatory condition that can be traced to the tube or ovary. In one of my cases there were intestinal adhesions all over and it was to be accounted for by a pus tube. I would like to hear some discussion on this point. Dr. Funkhouser has certainly had a rare case, where the fibroid recurred on the stump.

I think Dr. Jonas is right in leaving a piece of the uterus and an ovary where possible for these patients do not become the neurasthenics that they do when we remove both ovaries.

Dr. Taussig:—If we leave an ovary the nervous symptoms are far less severe. The change is less abrupt and even if we don't leave a part of the body of the uterus we should leave the cervix. Of course there is danger of the myoma returning but it is such an easy matter to remove it that it would not weigh against the advantages of leaving the cervix: but the difficulty of getting a patient back into your hands for another operation is very great.

The President:—In a large percentage of cases these little tumors do not develop further. The small fibroid nodules are found in about twenty per cent. of women over thirty, so I feel that is not a safe statement to make. I believe myomectomy will become very general rather than obsolete, and when carried out early will be found most satisfactory. Granted that in some cases where it is indicated, it is fully as dangerous as hysterectomy, still it is advisable because it saves the uterus. In young women the advantage of leaving the uterus fully justifies the risk of possible trouble from another fibroid. In some cases the preservation of the uterus is well worth the risk of a second or even a third operation.

Dr. Elbrecht:—What is your idea of the absorption of small ones after pregnancy and have you seen any such?

The President:—I do not count much on it. I have never seen an instance.

Dr. Glasgow:—If there is more of the myomatous tissue they are likely to undergo some change; fibroids do not.

Dr. Elbrecht:—I recall one case in which the tumor was the size of a lemon but after the uterus had undergone involution it was very much smaller than when first discovered.

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## EDITORIAL.

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### REPORT OF THE CHAIRMAN OF THE COMMITTEE ON PUBLIC HEALTH AND LEGISLATION; WITH SYN- OPSIS OF MEASURES PRESENTED TO THE STATE BOARD OF HEALTH AT ITS MEET- ING IN KANSAS CITY, NOVEMBER 28, 1906.

The committee on Public Health and Legislation desire to submit for your consideration some of the matters which we deem it of importance that your board should consider and embody in your annual report to the Governor with the view of assisting in the enacting of proper legislation.

First: We desire to present to you a copy of the bill which was drawn for the St. Louis Medical Society by Judge Shepard Barclay touching criminal abortion and also a proposed amendment of the law touching criminal abortion in relation to the admission of evidence. This bill has the sanction of the St. Louis Medical Society and has been transmitted to the committee of the State Association with request that it be referred to the state board of health:

#### PROPOSED DRAFT OF AMENDMENT OF LAW TOUCHING CRIMINAL ABORTION.

Amended Sec. 1825. Any person who with intent to produce or to promote a miscarriage or abortion, prescribes, advises, gives, sells or administers to a woman (whether actually pregnant or not) or who with such intent procures or causes her to take, any drug, medicine, or article or uses upon her, or advise to or for her the use, of any instrument or other method or device to produce a miscarriage or abortion (unless the same is necessary to preserve her life or that of an unborn child, or, if such person is not a duly licensed physician, unless the said act has been advised by a duly licensed physician to be necessary for such a purpose) shall, in the event of the death



of said woman or any quick child whereof she may be pregnant being thereby occasioned, upon conviction be adjudged guilty of manslaughter in the second degree and punished accordingly; and in case no such death ensue such person shall be guilty of the felony of abortion, and upon conviction be punished by imprisonment in the penitentiary not less than three nor more than five years, or by imprisonment in jail not exceeding one year or by fine not to exceed \$1,000.00, or by both such fine and imprisonment; and any practitioner of medicine or surgery, upon final conviction of any such offense as is above defined, shall also be subject to have his license or authority to practice his profession as physician or surgeon in the State of Missouri revoked by the State Board of Health in its discretion, upon satisfactory proof of such final conviction.

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#### PROPOSED AMENDMENT OF LAW TOUCHING CRIMINAL ABORTION IN RELATION TO THE ADMISSION OF EVIDENCE.

Sec. 2635-A. In prosecutions for abortion or for manslaughter occasioned by an abortion or miscarriage, or by an attempt to produce either, or attempted abortion, or for any crime of which abortion or miscarriage may be part of the essential facts to be proven, the dying declarations of the woman whose death is charged to have been caused thereby shall be competent evidence on the trial of any person charged with such crime, with like effect and under like limitations as apply to dying declarations in cases of felonious homicide, provided, that the party offering such declarations shall first satisfy the court by competent testimony that such woman was of sound mind when said declarations were made, and provided further that no conviction shall be based alone upon such declarations unless corroborated as to the fact that an abortion or miscarriage has taken place and in all such prosecutions aforesaid any physician or medical practitioner who may have attended or prescribed for such woman shall be a competent witness in said cause to testify concerning any facts relevant to the issue therein, and shall not be disqualified or held incompetent by reason of his relation to such woman as an attending physician or surgeon.

We also submit for your consideration an amendemnt to the law concerning the length of time during which the physician can be sued for malpractice.

Both of the laws mentioned are the result of instructions given to the committee on public health and legislation by the State Medical Association at its last meeting.

Our committee is also in receipt of an act to amend chapter 23 of the revised statutes of Missouri, 1899, in relation to druggists and their licenses, by adding a new section to be known as Section 3048a according to which druggists must file copies of prescriptions for intoxicating liquors, which reads as follows:

Every druggist, proprietor of a drug store or pharmacist shall, on the first Monday of each and every month, file with the county clerk of the county in which he is doing business, a copy of all prescriptions containing twenty per cent. or more of alcohol or intoxicating liquors compounded by him or those in his employ during the preceding month, and said copies of said prescriptions shall be accompanied by an affidavit of the druggist, proprietor of a drug store or pharmacist stating that said copies so filed

are true, and are copies of all such prescriptions filled by him or those in his employ during the preceding month; and on failing, neglecting or refusing to do so, shall be deemed guilty of a misdemeanor, and on conviction shall be punished by a fine not less than fifty dollars nor more than two hundred dollars.

Our committee recommends that you also give your endorsement to this bill which has been adopted by the meeting of the representatives of the various county medical societies held in St. Louis on July 10, 1906.

Concerning the other act, to increase the power of the state board of health, which was also adopted at that meeting, our committee has reached no conclusion and therefore suggests that you consider its merits and if it is thought expedient, embrace it in your report.

The question of collecting vital statistics in this state has been considered during several sessions of the General Assembly and we again urge upon you to have this matter brought before the legislature at its next meeting. Our committee is familiar with the proposed legislation as presented by the secretary following a resolution passed at the Hannibal meeting of the state board of health. The relative simplicity of this enactment as presented by the secretary will make its passage perhaps less difficult than the enactment of a new bill.

Another matter to which we call your attention is that concerning which directions were given our committee by the State Medical Association following the report of the committee on Medical Education, which was published in the July number, page 50, of the JOURNAL. In this report it is urged that the state board adopt the standard requirements recommended by the National Council of Medical Education and which your committee has formulated in the shape of an amendment to the present practice of medicine act.

We wish next to call your attention to a bill prepared by the committee of the United Pure Food Association of St. Louis and submitted to us by its chairman, Dr. H. W. Bartscher. The committee is not prepared to discuss in toto the contents of this proposed legislation. In a general way we wish to say concerning it that as you know Congress at its last session passed the so-called Pure Food bill. It is considered necessary in order to give protection to the various states against the adulteration of foods and drugs to have enacted by the several legislatures acts protecting the people of the various states against impure foods and drugs which might be manufactured and sold within the confines of the several states. The object of the bill herewith presented is to do this for the State of Missouri. Our committee endorses the intent of the bill and we request of you either to take up the consideration of this measure in detail, or endorse the general intent of it leaving the work of securing its passage by the legislature to the United Pure Food committee. This bill has the endorsement of various commercial organizations

of the city of St. Louis and of the State of Missouri and its advocacy by the state board of health will be of considerable assistance to the association which originated the measure.

The state board of health entered into an informal discussion of the propositions presented to them and in view of their importance decided to hold a special meeting for their detailed consideration in St. Louis on December 10, 1906.

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## HAS SUBSTITUTION BEEN REPLACED BY EXTORTION?

In a weekly paper published in this city there recently appeared an article under the caption "A New Medical Scheme," detailing the methods adopted by some physicians the object of which it is asserted is to prevent substitution of drugs by pharmacists. It would appear, however, from the plan followed that extortion of money from a patient for medicines ordered could easily be practiced. In the working of this scheme the doctor prescribes by number only and the druggist is forced to order the preparation from the Western Branch of the Pharmaceutical Laboratory, as the concern is known, located in the Colonial building. The charge to the druggist is anywhere from 50 cents to \$1.00 for each article thus making the charge to the patient range from 75 cents to \$1.25. Substitution is effectually prevented but extortion can easily be practiced because only the doctor and the members of the W. B. P. L. know what is contained in the prescription. Thus a dozen two grain capsules of quinine might cost the patient from 75 cents to \$1.00 when ordered in this manner. It is said that a young man was forced to pay \$6.00 for twenty or thirty ordinary-looking tablets, the druggist explaining that he was compelled to charge that amount as he was forced to pay \$5.00 for them. It is said that a Dr. F. L. Phillips is at the head of the concern and that a number of physicians in the city are members—some of them members of the St. Louis Medical Society. Dr. Phillips asserts that the plan has been submitted to the St. Louis Medical Society and was pronounced ethical. We believe the circumstances surrounding the management of this association will justify an investigation by the committee on ethics of the St. Louis Medical Society in view of the statement that it has the endorsement of that body.

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## THE PROGRAM.

The programs presented at past meetings of the Missouri State Medical Association have never fulfilled the aims and desires of the program committees. There has always been a feeling that the medical profession of Missouri could do better—therefore it should do better.



With this past experience in view, the present program committee is already at work and using every effort to bring out scientific material worthy of organized medicine in Missouri. The societies have all been recently communicated with and the success of the next meeting at Jefferson City, May 16-17-18, 1907, will depend in great measure upon the vigor, earnestness and promptness with which the societies act.

A new and special feature of the program will be a pathological exhibit to be contributed through committees from the medical schools of the state and through county societies. Suggestions for raising the work to the highest standard both as to papers and exhibits will be welcomed by the committee.

A state meeting should be in the nature of a short instructive post-graduate course. To this end it is more the quality of material presented that will be of benefit than an indiscriminate mass of papers which could not be read on account of the time limit. It is this exchange of ideas, opinions and experiences which makes medical meetings of real value to those in attendance. One practical point from each of a number of men discussing a paper is often of more value than a few points brought out from the experiences or observations of one essayist.

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### MEDICAL LEGISLATORS.

In connection with our oft-repeated statement of the necessity of co-operation on the part of the doctors in a community with those representing their interests in legislature we print an excerpt from a foreign journal showing how lack of unity will frustrate success:

We have often pointed to France as a country specially blessed in the possession of a considerable number of representatives of the medical profession in the Chamber of Deputies. Apparently in their own country these legislators share the proverbial fate of the prophet. Not long ago the *Semaine Medicale* went so far as to state that experience had shown that as far as the protection of the material interests of the profession is concerned, it does not matter whether there are few or many doctors in Parliament. We gather that their corporate influence is a negligible quantity. In Italy, where also the medical legislator flourishes, his services are held equally cheap by his brethren. Last year a medical group was formed of the doctors who had seats in the Italian Parliament. Much was expected of it, but it does not seem to have justified its existence. Quite recently a resolution was passed by the Council of the Federation of Medical Associations to the effect that, as the Medical Parliamentary Group has up to the present time done nothing in fulfillment of the hopes to which its formation gave rise, the Federation has decided to separate itself completely from the group and to exert independently whatever influence it can bring to bear on Parliament as a whole.—*British Med. Jl.*, Oct. 27, 1906.

An intelligent reading of the above cannot fail to make clear to a doctor, even though he be lukewarm where his personal interests are not at stake, the importance of a sympathetic attitude to the demands made by the medical legislators. Dissensions in our medical ranks weaken the force and virility of the influence of the men whom we look to for righting our wrongs in legislature. This was done in the past by non-medical legislators circulating reports, albeit exaggerated but nevertheless containing a grain of truth, that the medical legislators were not representative of the medical thought of the state because of a slight difference of opinion in medical circles. No remark is more easily seized upon by legislators and the people at large than something that can be construed by them into a statement justifying their antagonism against measures introduced by the medical profession for the benefit of mankind. So long as the community is under the impression that a measure is not indicative of unity of thought among physicians, the legislator will be sadly handicapped and his efforts in behalf of the people will be fruitless.

The lesson learned from the above quotation shows us beyond a doubt that the failures recorded in France and Italy were due to just those causes which for months we have considered inimical to success. To say that the same does not and can not obtain among us because we are a people of a different temperament and habits is a fatuity, since human nature is the same the world over. Rather should it be a lesson not to be read and then forgotten but treasured up in the memory as an instance why failure resulted instead of success. z

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#### PHYSICIANS IN THE LEGISLATURE.

The following is a list of the medical members of the legislature: Senate: Frank De Vilbiss, Eugent. House: Adair county, Frank P. Young, Kirksville; Cole county, J. P. Porth, Jefferson City; Dallas county, I. Phillips, Buffalo; Gasconade county, Alonzo Tubbs, Canaan; Jackson county, N. Holcomb, Oak Grove; Jefferson county, W. E. Gibson, DeSoto; Newton county, E. M. Roseberry, Neosho; Ray county, T. B. Cook, Rayville; Scott county, S. J. Wade, Benton; Wright county, R. H. Hanson, Hartville; St. Louis city, G. H. Wilson, 2610 N. 10th St.

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#### MR. WAMSLEY AND HIS DEFEAT.

The discomfiture of a lost leader is illustrated in the case of H. R. Wamsley, the "Father of the Game Law." His indignation against the physicians of the state for a lack of faith among his constituents should be construed by the medical profession as a compliment to our strength and probity. Mr. Wamsley with rare candor proclaims that he opposed the passage of laws designed to give the state board of health "power of confiscating property, arrest and drafting into its service the peace officers of a community in time of emergency." His resentment because the doctors retaliated would indicate that in his

estimation the medical profession is a sorry lot and should be supine to meet his ideas as to his importance as a factor in the state. But the mere recognition on his part that his defeat was wholly due to the influence the physicians had with his constituents gives us a hope for future reforms. It shows indisputably that people though blindly lead for years can realize even late in the day the errors of their ways. By reversing their good opinions of Mr. H. R. Wamsley they have shown their appreciation of progress in the right direction and have helped the medical profession in removing an obstacle in the passage of laws affecting the good of the community.

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#### WHAT IS BEING DONE IN MISSOURI TO AID THE FIGHT AGAINST TUBERCULOSIS IN THE STATE.

The State Sanatorium for incipient tuberculosis will soon be ready for patients.

The State Medical Association has arranged for a whole session's discussion of tuberculosis from the civic standpoint under charge of a special committee.

Each county medical society has been requested to appoint a local committee on tuberculosis to present statistics and recommendations to the State Association.

"The Anti-Spitting" ordinance has received special attention with noticeable results.

The registration of consumptives progresses smoothly and efficiently giving increased facilities for statistics and action thereon.

The Society for the Prevention of Tuberculosis has recently distributed 555,000 cards and leaflets among the homes, workshops, street cars and institutions of the city. Lectures have been given and more are promised by the lecture committee.

The Society for the Relief of Consumptives just organized has already a large membership and important work outlined. The profession should largely attend its first public meeting in the St. Louis Medical Society hall, December 12th. These two associations will work in harmony.

For the care of consumptives, in addition to the above, the St. Louis board of health has a special clinic conducted by able physicians and demonstrations in tuberculosis are given to practitioners and senior students every Saturday from two to four under the care of one of the Universities.

Mount St. Rose Sanatorium for tuberculosis has cared for over 1,000 patients in four years and has need for double its present capacity.

The above is but a beginning in the great work in our city and state. The future rests not so much with the few already at work as with the many who are interested but have not yet felt their responsibility.



Following is a list of physicians who made application for membership in the first twenty days in November:

Allen, C.....	Blairstown.	Griffith, A. I.....	Stoutville.
Alpin, W. H.....	Hamilton.	Gum, E. J.....	Stinson.
Appleberg, Reuben.....	Leadwood.	Hall, H. E.....	Laredo.
Arthur, S. F.....	Lacoma.	Hall, W. S.....	Novinger.
Ashley, Thos. J.....	Orriek	Harding, D. E.....	Aurora.
Barth, P. H.....	Bismarck.	Harrison, E. P.....	Flemington
Barnes, F. M.....	Brashear.	Hanning, W. L.....	Humphreys.
Beers, E. G.....	Springfield.	Hedges, Frank.....	Pattonsburg.
Benage, J. L.....	Iberia.	Henderson, J. P.....	Kansas City.
Bowers, H. E.....	Osgood.	Henry, A. M.....	Kansas City.
Bradley, U. S.....	Harris.	Herrington, W.....	Green City.
Bradshaw, J. T.....	Montrose.	Hill, E. C.....	Smithville.
Bronaugh, J. H.....	Calhoun.	Holliday, S. J.....	Pollock.
Brown, John.....	Cameron.	Hopkins, W. S.....	Bolivar
Brown, W. McF.....	Stafford.	Houser, F. W.....	California.
Bruton, J. W.....	Ozark.	Howard, T. S.....	Chilhowee.
Byler, Wm. F.....	Koeltztown.	Hunter, Wm. B.....	Fortuna.
Casey, J. H.....	Liberty.	Isley, D. L.....	Excelsior Springs.
Clark, H. R.....	Pierce City.	Jacobs, H. P.....	Camden.
Clark, J. W.....	Springfield.	Jarrett, S. S.....	Pattonsburg.
Conover, Chas. C.....	Kansas City.	Jose, J. E.....	Belle.
Coussins, S. W.....	Morrisonville	Johnson, W. E.....	Madison.
Cowan, Lee.....	Iatan.	Jurgens, L. C.....	Kirkville
Crane, T. V. B.....	Springfield.	Keith, S. R.....	Excelsior Springs.
Darrell, G. B.....	Republic.	Kerr, U. F.....	Springfield.
Denman, Joel I.....	Kansas City.	Kessinger, J. C.....	Milan.
Desmond, H. E.....	Plattsburg.	Kinsey, J. T.....	Lathrop.
Dewey, J. E. ....	Springfield	Loafman, J. E.....	Bolivar.
Doggett, J. C. R.....	Crane.	Longfield, J.....	Turney.
Domino, J.....	Herman	Loer, T. R.....	Billings.
Doran, Thos.....	Trimble.	Lister, R. B.....	Desloge.
Drake, W. D.....	Bolivar.	Lynch, J. C.....	Kansas City.
Duffie, W. M.....	Millard.	McAlester, A. W.....	Kansas City.
Elkins, C. B.....	Springfield	McArthur.....	Kansas City.
English, J. H.....	Farmington.	McClure, L. E.....	Walnut Grove.
Estill, W. G.....	Lawson	McConnell, J. L.....	Connellville.
Etherton, Wm. C.....	Camden.	McCormick, E. C.....	Farmington.
Evans, E. E.....	Bois D'Arc.	McCutchen, J. E.....	Lemonville.
Farthing, K. R.....	Sparta.	McEwen, G. A.....	Farmington.
Ferguson, J. P.....	Springfield	McKenzie, D. H.....	Leadwood.
Field, W. S.....	Kansas City.	McGee, D. W.....	Granville.
Fleming, Chas. R.....	Farmington.	Magee, R. S.....	Green City.
Foster, T. H.....	Coffeyville.	Martin, W. W.....	Sperry.
Freeland, P. L.....	Pierce City.	Matlock, L. J.....	St. James
French, U. S.....	Republic.	Mayfield, M. H.....	Springfield.
Fry, Chas.....	Syracuse.	Meredith, S. G.....	Cowgill.
Furnish, J. A.....	Gransville.	Meredith, O.....	Breckenridge.
Fuson, P. B.....	Springfield.	Mitchell, A. W.....	Humansville.
Garner, R. L.....	Pollock.	Mitchell, A. P.....	Bolivar.
Grady, L. C.....	Laden.	Miller, T. D.....	Aurora
Gray, L. M.....	California.	Mizener, J. L.....	Edgarton.
Griffith, S. H.....	Humansville.	Moore, W. A.....	Westline.

Munn, W. E.....	Pure Air	Smith, J. V.....	Hardin.
Nagle, P. E.....	Billings.	Smith, S. B.....	Walnut Grove
Neeley, J. E.....	Vancleve.	Smith, S. D.....	Cowgill.
Noe, L.....	Connellville.	Smith, W. L.....	Sparta.
Numm, J. C.....	Novinger	Smith, W. S.....	Rolla.
O'Bryan, L. F.....	Jacksonville.	Spark, E. E.....	Amsterdam
Oyler, H. W.....	Mill Grove	Sparling, G. A.....	Kirksville.
Palmer, W. C.....	Dayton.	Sprinkle, W. C.....	Monroe City.
Parker, J. Z.....	Pattonsburg.	Stapp, J. H.....	Hardin
Parsons, Wm.....	Greencastle	Stacy, E. W.....	Princeton.
Perry, J. K.....	Walnut Grove	Stammer, F. W.....	Bismarek.
Peters, M. L.....	Cameron.	Stephens, J. M.....	Calhoun.
Pickett, C. P.....	Mercer.	Strieby, U. G.....	Brownington
Pool, W. O.....	Stoutland	Sutcliffe, G. N.....	Jamesport.
Poole, A. R.....	Milan.	Swaney, A. G.....	Lee's Summit.
Powell, B. S.....	Mercer.	Sweeney, J. L.....	Monroe City
Ragsdale, T. J.....	Lee's Summit	Tadlock, H. L.....	Holt
Randolph, A. B.....	Kansas City.	Taylor, H. L.....	Greencastle.
Rentfro, E. W.....	Rayville.	Taylor, C. D.....	Brownington
Redman, S. H.....	Tipton.	Thomas, C. O.....	Worthington.
Reece, W. C.....	Elvins.	Thomas, C. S.....	Laredo
Rhoads, M. H.....	Austin.	Thompson, A. W.....	Galt.
Rice, Marion.....	Stotts City	Thurman, S. F.....	Potosi.
Roberts, I. M.....	Green City	Tickle, S. W.....	Springfield.
Robertson, A. W.....	Lathrop	Todd, C. S.....	Hartwell
Robinson, G. W.....	Kansas City.	Tout, B. B.....	Archie.
Hoberts, J. F.....	Bolivar.	Tunnell, J. D.....	Regar
Robinson, J. D.....	Belgrade.	Underwood, J.....	Parksville.
Roney, John H.....	Lawson	Voegelin, Samuel.....	Kansas City
Ruyle, H. J.....	Springfield.	Wainwright, A. G.....	Bonne Terre.
Seibert, A. W.....	Windsor.	Williams, G. B.....	Flat River.
Seibert, M.....	Windsor.	William, W.....	Kirksville.
Seibert, A. W.....	Desloge.	Williams, L. E.....	Boaz
Seibert, Minnie .....	Desloge.	Williams, N. C.....	Springfield.
Shafer, F. M.....	Edgarton.	Williams, R. F.....	Springfield
Shepler, R. H.....	Mystic.	Wilson, C. E.....	Kansas City
Shultz, J. W.....	Weston.	Wilson, J. S.....	Deepwater.
Shumate, L. St. Clair..	Reeds Springs.	Winter, J. H.....	Parksville.
Shriver, C. M.....	Harris	Woods J. Robt.....	Smithville.
Sley, J. P. T.....	Excelsior Springs.	Wyatt, Thos. E.....	Kansas City
Smith, A. P.....	Ash Grove.	Yeargan, J. P.....	Irondale.
Smith, A. S. J.....	Dearborn.	Yokom, G. D.....	Parksville.
Smith, G. W.....	Henry.	Young, J. C.....	Ozark.

## COUNTY SOCIETY NOTES

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### CALDWELL COUNTY MEDICAL SOCIETY.

Caldwell County Medical Society met at Hamilton on October 3rd. Daviess County Medical Society had been invited to attend this meeting and take part in the proceedings and the following members of that body were present: Drs. D. M. Hanna, W. L. Brosius and M. A. Smith of Gallatin, and A. M. Wetzel, of Jameson. Dr. Thompson, of Meadville, Linn County, was also present.

Dr. B. F. Carr reported a number of cases of pleurisy with effusion; Dr. N. M. Wetzel read a paper on dysentery; Dr. Tinsley Brown read a paper on the use of hyoscine and morphine as a general anesthetic and hypnotic, and reported a number of cases. Dr. Lindley presented a patient, a baby two months old, with umbilical hernia; the patient also had continuous protruding of the tongue. The opinion of most of the members was that symptoms of cretinism were present in this case. Dr. C. O. Dewey read a paper on arteriosclerosis.

The next meeting will be held at Kingston on the first Wednesday in January.—TINSLEY BROWN, M. D., Reporter.

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### CASS COUNTY MEDICAL SOCIETY.

Cass County Medical Society met in the office of the secretary at Liberty on October 29th, twelve members being present. Dr. J. C. Bateson, of Scranton, Pa., was present as a visitor. Dr. Bateson is representing the American Medical Association and assisting in the organization of local county societies.

Dr. J. M. Griffin of Excelsior Springs, presented a thoughtful paper on the treatment of "Chronic Nephritis," which called forth a liberal discussion. Dr. F. H. Matthews, of Liberty, read a paper on "The Use of Ichthyol," which was well received.

A resolution was adopted instructing the president to appoint a member to read a paper on the therapeutic application of some drug at each meeting of the society.

Dr. J. T. Mash, of Liberty, reported a case of unconsciousness with peculiar manifestations. Dr. R. E. Sevier, of Liberty, reported a case of cellulitis from an infected nail wound. Dr. J. T. Mash reported a case of hematuria of long standing and of obscure origin. D. J. M. Allen, of Liberty, then ably discussed the subject of "Acute Dysentery."

The attitude of physicians toward osteopathy was discussed, and



it was declared to be an unprofessional act to treat any case which was being seen or treated by any one calling himself an osteopath.

The meetings of this society continue to be well attended, with much interest manifested.—F. H. MATTHEWS, M. D., Secretary.

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### GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY.

The regular meeting was held at Meta, October 25th, the president, Dr. J. J. Ferrell, in the chair. Eight members were present.

Dr. S. J. Terrell presented a clinic that was discussed by all present. The Chairman, Dr. J. J. Ferrell delivered the Annual Address. Dr. J. D. Seba read a paper on Medical Laws: What They Are and What They Should Be. It was then moved to adjourn until 7 o'clock P. M.

At 7 o'clock the body was called to order by the President. Dr. Seba's paper was discussed by Drs. Nieweg, Englebrecht, W. R. Ferrell, Spurgon, Rademaker, Neely, Briegleb, Terrell and closed by Seba.

Dr. John Englebrecht read a paper on "Prostatitis." Discussed by Dr. Seba.

Dr. Briegleb read a paper on "Protection Against Damage Suits." Discussed by all present.

Dr. Nieweg read a paper on "Corporeal Endometritis." Discussed by Drs. Englebrecht, Seba, W. R. Ferrell, Briegleb, Spurgon, Neeley, Byler, J. J. Ferrell and closed by Nieweg.

Drs. W. F. Byler, J. E. Jose and J. E. Neeley were elected active members. Dr. Briegleb was elected a social member.

The following resolutions were offered by Dr. Seba and carried: Resolved, That this society endorse the establishment of a State Health Commissioner with an office at the State Capitol; that the coroner of each county be made the County Health Officer, and that we instruct our respective representatives to work to this end.

Dr. Nieweg offered a resolution to amend Sec. 2 of Chap. II by striking out the word "fourth" and adding in lieu thereof the word "second;" and by striking out the words "April and October" and adding the words "December, March, June and September." Also Sec. 2 of Chap. IV, by striking out the word "October" and inserting the word "December." Dr. Spurgon offered a resolution to amend Sec. 2 of Chap. I by striking out the word "next" and inserting the word "same." Both resolutions were read and laid on the table until the next meeting.

Dr. Seba moved that a vote of thanks be extended to the citizens of Meta, in general and the doctors in particular for the generous entertainment of the society. Carried.

The secretary reported \$10.75 in the treasury. Also that six

members paid dues in the year of 1905, while thirteen paid dues in the year of 1906. It was moved and carried that a special meeting be held at Bland, at 12:30 p. m., on the second Thursday in December, 1906, to prepare a bill on medical legislation. Also to invite the representatives from the three counties to be present.

The officers elected for the ensuing year are as follows: President, Dr. W. R. Ferrell; vice president, M. E. Spurgon; secretary-treasurer, J. W. Nieweg; delegate, J. J. Ferrell; censor, S. J. Terrell.

Dr. J. D. Seba was appointed to read a paper at the next meeting of the State Society.

The next regular meeting will be held at Owensville.—J. W. NIEWEG, M. D., Secretary.

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### JACKSON COUNTY MEDICAL SOCIETY.

The Jackson County Medical Society held its regular weekly meeting on Tuesday evening, October 9th, in the Club Rooms of the Kansas City Athenaeum, the president, E. H. Thrailkill, in the chair. There was an attendance of 32 at this meeting.

Applications for membership were received from Drs. W. L. McBride, George G. Kreeger, and W. C. Klein, and referred to the Board of Censors. The membership committee having reported favorably upon the applications of Drs. O. L. McKillip, O. P. Faires, and Roger B. Brewster, they were duly elected to membership.

The professional program consisted of a paper by Dr. N. A. Drake, on the subject of "Our High School Curriculum Defective."

The Doctor considered the problem of how best to instruct girls at the age of beginning menstrual function in the care to be taken at this period in order to prevent derangements which result either from lack of proper physical development or from carelessness and neglect during menstruation. He recommended more instruction in physical culture, and raised for discussion the question of the feasibility of teaching girls in High School something with reference to the physiology of the menstrual function.

Those taking part in the discussion were Doctors C. J. Morrow, Franklin E. Murphy, John Puntton, C. Lester Hall, J. M. Langsdale, Maggie L. McCrea, Avis E. Smith, Nannie A. Stephens. Dr. Drake closed the discussion.

Before adjournment, two cases of considerable interest were reported briefly. One by Dr. E. von Quast, of a patient who had received two bullet wounds, one of which was very serious, the bullet entering the neck below the sub-lingual gland on the right side passing backward and toward the left side, through the deep structures of the neck, perforating the esophagus and larynx; deflected by the deep faciae on the left side it escaped just to the left of the sternomastoid above the clavicle; the patient holding his left arm elevated at the

moment of injury, the bullet re-entered the soft tissues of the shoulder and lodged at a point over the spine of the scapula. The patient made an uninterrupted recovery.

Dr. C. J. Morrow reported a case of extremely distressing vomiting of pregnancy which resisted all methods of treatments; the question of producing abortion was being considered by Dr. Morrow.

#### MEETING OF OCTOBER 23, 1906.

The meeting was held in the University Building, the president, Dr. E. H. Thrailkill, in the chair. Twenty-eight were in attendance.

A communication under the date of October 15, 1906, was received from the Secretary of the State Board of Health, in reply to a complaint from the Jackson County Medical Society regarding Dr. C. H. Carson. The board after describing the present status of the case against the above mentioned advertiser, requested all who could furnish evidence by citing cases treated by Dr. Carson and for which he had received payment, to send same to the secretary of the Board of Health. Upon motion of the Secretary, this communication was referred to the local committee on public health and legislation, with a request for an early report.

The membership committee reported on the applications of Dr. George G. Kreeger, W. L. McBride, and W. C. Klein. Ballots were spread and they were duly elected to membership in this society.

A motion in writing was introduced by Dr. Fred T. Van Eman to so change the Constitution as to make the meeting nights on alternating Saturday evenings.

The program of the evening consisted of the report of a case of "Congenital Deformity" by Dr. Gordon A. Beedle and a paper on the subject "The X-Ray as a Diagnostic Aid" by Dr. E. H. Skinner. The case presented by Dr. Beedle was that of a boy sixteen months old. The congenital deformity was the complete absence of the left leg from about two inches below the knee-joint: on the right foot, talipes equino-varus with absence of toes: the child was normal in every other respect. The report was discussed by Dr. A. E. Hertzler. The paper by Dr. E. H. Skinner, was a practical consideration of the value of the x-ray in the diagnosis of various pathological condition such as inflammatory lesions, new-growths, consolidations, cavities, etc., as well as bone and joint injuries and diseases, and the presence of foreign bodies. Dr. R. McE. Schauffler opened the discussion, the following also taking part: Doctors F. P. Clark, O. H. McCandless, J. N. Scott, Maggie L. McCrear, F. J. Moennighoff, Herman E. Pearse, and A. E. Hertzler. Closed by Dr. Skinner.

#### MEETING OF OCTOBER 30TH, 1906.

The regular weekly meeting was held in the University Building. In the absence of the president and vice president, Dr. J. W. Kyger was requested to preside over the meeting.



The program of the evening consisted of a paper by Dr. C. B. Hardin, and the report of a case by Dr. W. K. Trimble. The title of Dr. Hardin's paper was "Some Remarks Concerning the Constitutional Effects of *Tenia Solium*," and it proved to be a very interesting consideration of the subject of tape-worms in general, their symptomatology and treatment. Dr. Chambers opened the discussion with some remarks as to etiology and prophylaxis. Others taking part in the discussion were: Doctors G. A. Beedle, Franklin E. Murphy, Roger B. Brewster, Avis E. Smith, Robert O. Cross, Annie J. Scott and J. W. Kyger; the discussion was closed by Dr. Hardin.

Dr. William K. Trimble presented a highly interesting case of epithelioma of the nose, in a man 45 years of age and presented the patient. The growth was of a very rapidly growing type, and seemed to be responding successfully to the treatment by the x-ray. This case was characterized by extremely rapid development and was accompanied by marked adenopathy, especially of the cervical lymphatics on both sides. The condition began on July 1st, by a small sore on left side of nose and for several weeks ran a very acute course, owing probably to accompanying inflammation. Microscopic examination showed this to be of the squamous celled type of epithelioma. The discussion was opened by Dr. Roger B. Brewster, who stated that it was sometimes difficult to differentiate even microscopically a lesion like the one presented from a tertiary syphilitic manifestation. Others entering into the discussion were, O. H. McCandless, who spoke of the x-ray treatment of such conditions and of this case in particular; B. C. Hyde and J. Q. Chambers, and Franklin E. Murphy who questioned the diagnosis in the case and suggested that this was probably a syphilitic chancre of the nose. The discussion was closed by Dr. Trimble.

Before adjournment the Society returned to miscellaneous business in executive session.

Dr. B. C. Hyde brought up for consideration the matter of the nomination of Harry Walmsley as Representative from the Fifth District of Jackson county, and requested that a committee be appointed to act in conjunction with one from the Kansas City Academy of Medicine in the work of opposing the election of any one to whom physicians could not trust matters of state and legislation. After some discussion it was moved and seconded that the Jackson County Medical Society appropriate \$75.00 for the above purpose. The Secretary offered an amendment that committee of three be appointed from the Jackson County Medical Society with one from the Academy; this was seconded and the motion as amended carried. On this committee were appointed Drs. Herman E. Pearse, N. A. Drake, and R. W. Holbrook.

#### MEETING OF NOVEMBER 6TH, 1906.

Dr. E. H. Thrailkill, president, in the chair. Fifty-five were in attendance at this meeting.

The membership committee reported favorably upon the applications of John G. Sheldon and Charles R. Johnson. Ballots were spread and both duly elected to membership.

The scientific program of the evening consisted of a paper by Dr. W. J. Frick, entitled "Intestinal Perforations." The essayist treated especially of the symptoms and diagnosis of perforations, from various causes such as ulcerations and other pathologic conditions and gunshot wounds and other traumata. The most important symptoms were pain, muscular rigidity and tenderness. Dr. J. F. Binnie opened the discussion; he placed particular emphasis on the symptoms, especially the tripod as he termed them, pain, tenderness and muscular rigidity, and on the fact that in these cases early operation only promised the best results. Others taking part in the discussion were. Drs. J. D. Griffith, A. E. Hertzler, E. von Quast, and G. H. Hoxie. Dr. Fick closed the discussion.

Dr. W. H. Forsythe, a visiting physician from Korea, made some interesting remarks of his experiences in the practice of medicine in his part of the world.

#### MEETING OF NOVEMBER 13TH., 1906.

The regular weekly meeting was held in the Densmore Hotel. Dr. J. W. Kyger in the chair in the absence of the president. Fifty-two were in attendance at this meeting.

The application of Dr. George Howard Hoxie for membership was received and referred to the Board of Censors.

The society endorsed the resolution adopted unanimously by the Missouri State Medical Association on May 15, 1906, a copy of which was received by the Secretary, November 12th. These resolutions were in criticism of those Life Insurance Companies which had recently ordered a reduction in the fee for medical examinations. Similar resolutions were read which had been adopted by the Kentucky State Medical Association: the latter placed the minimum fee for an examination at \$5.00.

The Committee on Hall reported dissatisfaction in regard to the meeting place, and upon motion it was decided to meet in the Athenaeum Club Rooms, on November 20th.

The professional program consisted of two papers, one by Dr. John Punton, entitled "The Treatment or Prophylaxis of Curable Mental and Nervous Diseases," the other by Dr. T. R. Thornton of Lee's Summit, Missouri, on the subject "Hay Fever." Dr. Punton's paper was of unusual originality, displaying a great amount of research, investigation and practical experience. He considered the treatment and prophylaxis of those cases of mental deviations which are classed as border-line cases: such as are on the verge of insanity, but which do not properly belong for treatment in an asylum for the insane. A collection of interesting statistics was read presenting the percentage of

deaths in this county from diseases of the nervous system. The discussion was opened by Dr. C. C. Goddard of Leavenworth, Kansas, Drs. Langsdale and Hardin also taking part. Dr. Punton closed the discussion.

Doctor Thorton's paper on "Hay Fever" was well discussed by Drs. Theodore S. Blakesley and J. W. Gaines. Dr. Thornton closed the discussion.

MAX GOLDMAN, M. D., Secretary.

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### HOWARD COUNTY MEDICAL SOCIETY.

The November meeting was held at Fayette on November 2nd.

Dr. Jas. E. Jordan, formerly of New Franklin, Mo., transferred his membership to Howard County Medical Society. Doctors H. K. Givens and C. P. Magee were also elected to membership.

The question of reciprocity with other states was brought up for informal discussion. The general sentiment was strongly in favor of the law providing for reciprocity with other states.

Officers were elected for the year 1907 as follows:—President, N. E. Smith, Fayette; vice-president, J. A. White, New Franklin; secretary and treasurer, C. W. Watts, Fayette; board of censors, C. O. Lewis, Fayette, J. B. Fleet, New Franklin, and J. R. Champion, Hilldale.—C. R. WATTS, M. D., Reporter.

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### LEWIS COUNTY MEDICAL SOCIETY.

Through the efforts of Mr. C. H. Roney, representative of the American Medical Association, and of Dr. Jurgens, District Councilor, twenty physicians of Lewis county made application for charter membership in the Lewis County Medical Society. The applications were handed to Dr. Jurgens and a meeting to establish permanent organization was called for October 25th, at Monticello.

On October 25th the applicants met in Monticello and permanent organization was perfected. Dr. Jurgens was prevented from attending and in his absence Dr. J. C. Brown was elected chairman.

The following officers were elected for the ensuing year:—President, J. C. Brown, Lewistown; vice-president, P. T. Wiseman, Monticello; second vice president, Wm. Ellery, LaGrange; treasurer, H. E. Dunlop, Canton; secretary, Paul F. Cole, Steffenville.

On motion a committee was appointed to draft a fee bill, the committee to consist of one member from each section in the county. A committee was appointed to draft a constitution and by-laws and also a committee on program.

The following is a list of the charter members: Geo. P. Knight, Benjamin; G. F. Thomlin, Williamstown; A. A. Perry, Williamstown;



T. P. Wiseman, Monticello; C. O. Shanks, Canton; Junius Thompson, Canton, H. E. Dunlop, Canton; W. L. Ellery, LaGrange; R. E. Wilson, LaBelle; C. N. Frame, Ewing; N. O. Owens, LaGrange; Wm. Ellery, LaGrange; T. F. McGlasson, Lewistown; H. W. McKim, La Belle; Paul F. Cole, Steffenville; J. B. Marchand, Monticello; Dr. J. D. Raines, Maywood; J. C. Brown, Lewiston; Geo. L. McCutchan, Monticello; R. B. Schofield, Lewistown.

There are still a number of physicians in the county who are of high moral and professional standing and they are expected to join at our next regular meeting.—PAUL F. COLE, Secretary.

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### STODDARD COUNTY MEDICAL SOCIETY.

The regular bi-monthly meeting was held at Acorn Ridge on November 5th, twelve members being present.

The board of censors reported favorably on the following applicants for membership and they were duly elected: W. H. Goad, J. F. Riddle, of Bernie; S. L. Mayfield, J. L. Cook and R. L. Ramsey, of Advance; W. B. Kerr, of Dudley.

The secretary reported twenty-two paid up members exclusive of the six elected this evening, making a total membership of twenty-eight out of a possible 35 reputable physicians in active practice in the county.

The election of officers for 1907 resulted as follows: President, T. B. Wingo; vice president, Ed. Moore; secretary, John Ashley, treasurer, E. L. Elmore; reporter, Geo. W. Vernon; delegate, D. R. Corbin; alternate, Ed. Moore; member board of censors, J. F. Slayden.

Dr. Ashley read selections from the code of ethics. A general discussion followed the reading, special attention being given to the articles referring to advertising, consultations, the relations of physicians to each other and to the public.

The next meeting will be held at Dexter on the first Wednesday in January. All physicians in the county are earnestly requested to attend our meetings.—GEO. W. VERNON, M. D. Reporter.

## BOOK REVIEWS

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**SURGICAL SUGGESTIONS.**—Practical Brevities in Surgical Diagnosis and Treatment. By WALTER M. BRICKNER, M. D., Chief of Surgical Department, Mount Sinai Hospital Dispensary, New York, and ELI MOSCHOCOWITZ, M. D., Assistant Physician, Mount Sinai Hospital Dispensary, New York. New York: SURGERY PUBLISHING Co. 1906.

Surgical Suggestions should be in the hands of every practitioner old or young, kept at hand continually, and committed to memory. It covers all subjects in a terse, epigrammatic manner that will be enjoyed by all.

All material is grouped under side headings in red so that matter is easily referred to.

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**PHARMACY—QUIZ COMPEND.** By F. E. Stewart, M. D., Ph. G., P. Blakiston's Sons & Co., 1012 Walnut St., Philadelphia. Price, \$1.00.

The Compend on Pharmacy is a very desirable sample of its kind. Students will derive a great deal of benefit from the concise manner of putting the subject matter, and for the practitioner it is a handy volume for reference.

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**WALTER REED AND YELLOW FEVER.** By Howard A. Kelly, M. D. New York. McClure, Phillips & Co. 1906.

This biography of Walter Reed of Yellow Fever renown is a volume to be read with great zest by the man or woman who enjoys the struggles and successes of their fellows.

Every physician should read the book and especially those who think themselves circumscribed by environment. The man of abundant opportunity seldom develops; but the man who struggles never fails to do so. The book is printed in large type with wide margins, making it a very enjoyable volume.

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**CHRISTIANITY AND SEX PROBLEMS.** By Hugh Northcote, M. A. Crown Octavo, 257 Pages. Bound in Extra Cloth. Price, \$2.00, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

This volume is scholarly in research and diction, but coupling christianity and sex problems seems so incongruous that we have read the book with not a little curiosity.

This work will be interesting to scholars in and out of the medical profession, but limited in its utility for the rank and file.

ATLAS AND TEXT BOOK OF HUMAN ANATOMY. Volume 1. By Professor J. Sobotta, of Wurzburg. Edited with additions, by J. Playfair McMurrich, A. M., Ph. D., Professor of Anatomy at the University of Michigan, Ann Arbor. Quarto volume of 258 pages, containing 320 illustrations, mostly all in colors. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, \$6.00 net; Half Morocco, \$7.00 net.

This entirely new work on human anatomy is undoubtedly the most beautiful and practical ever produced, the numerous large quarto-size plates representing in colors the anatomic structures with wonderful accuracy and clearness. Professor Sobotta's concise, yet clear style, so admirably maintained in the English translation, makes the work an ideal text-book for the student and an invaluable aid to the physician, surgeon, and anatomist. Volume 1 treats of bones, ligaments, joints, and muscles.

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#### NOTES.

*The Century* promises for 1907 a remarkable list of fiction, more, and more exquisite color work than ever, and special articles that will cover a wide range of vital and timely topics.

A. E. W. Mason's brilliant novel, "Running Water," will continue through several months; and arrangements are made to give new subscribers from November the numbers containing the earlier chapters. In an early issue will begin a new serial, "Come and Find Me," by Elizabeth Robbins. Mrs. France Hodgson Burnett's new novel, "The Shuttle," begins in the November *Century*. It is the expectation of those who have read the manuscript that popular opinion will rank this "novel of social internationalism" as the greatest work Mrs. Burnett has yet accomplished: Of unique interest will be E. W. Scription's article on "The German Emperor's Voice," which will include a brief, unpublished essay by Emperor William himself. Fresh recollections of Whistler have been written by Cyrus Cuneo and Otto Bacher.

A fuller announcement of the good things of 1907 will be sent to any address on request by The Century Company, Union Square, New York, City.

*St. Nicholas* in 1907.—The girl or boy grows up without the companionship of *St. Nicholas* misses a pleasure and an influence for good, for which nothing in later years can atone. Make *St. Nicholas* your children's friend in 1907.

Its pages will be rich the coming year with a series of fairy tales by Frances Hodgson Burnett. The author of "Mrs. Wiggs of the Cabbage Patch" has written a serial story for boys; there is to be a special "Abbie Ann," from the author of the Emmy Lou stories and an abundance of other material for the boys and girls.



# JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

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## ORIGINAL ARTICLES

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### INTESTINAL OBSTRUCTION FROM TUBERCULAR PERITONITIS.\*

BY ROLAND HILL, M. D., C. M., ST. LOUIS.

Tubercular peritonitis is not a disease of common occurrence, and cases in which it leads to intestinal obstruction are exceedingly rare, indeed.

This disease is caused by the lodgment of the tubercle bacilli in the peritoneum, and the formation of pathological lesions, which in different cases, differ quite widely in character.

Moynihan classifies tubercular peritonitis into—1. Ascitic form. 2. Fibrous form. 3. Suppurative form.

The ascitic form is characterized by the presence of clear ascitic fluid in the peritoneal cavity. No adhesions, as a rule, are present, and the peritoneum, both parietal and visceral, is usually simply studded with small tubercular nodules. The membrane is thickened, rough and congested; often bleeds readily, and has lost its polish and smoothness. As a rule, there are no adhesions present in this variety of the disease.

The fibrous form of the disease is very rare, and is due to a deposit of tubercles in the peritoneum, but is not attended with ascitic effusion. In this variety of the disease the peritoneal surfaces may be adherent together to such an extent that the whole cavity seems filled with adhesions, and little or no free space is left. In this form, naturally, we would expect obstruction of the bowel to be of more frequent occurrences owing to the contraction of adhesions binding the bowel in such a way as to prevent passage of its contents.

The ulcerative form of this disease is, also, rare. In it the tubercular deposits first undergo caseation and then suppuration, forming localized abscesses.

The first case I have to report today is one of fibrous tubercular peritonitis, leading to complete obstruction of the intestine, with the formation of a large mass distinctly discernable from the outside of the abdomen.

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\*Read at the annual meeting Jefferson City, May, 1906.

Mrs. J. S., white, English by birth, age at the present time, forty-five years. Her family history is a particularly good one; there were nine children in the family, and two of them had diphtheria and died. Outside of this there is no history of sickness of any kind among them. Her mother lived until forty-two years of age, and died as a result of child-birth. Her father died at the age of fifty-seven, from pneumonia.

The patient during early girlhood had been always strong and robust, and did not know what it was to be sick. The first time she ever noticed that anything was wrong was after a heavy lift or strain, in 1881, when she was twenty years old. After this she complained at intervals of severe pain in the back; numbness at times over all parts of the body, even head and tongue, and dizziness. This series of symptoms occurred at irregular intervals up to May 21st, 1896. On this date the patient was seized suddenly with very severe, gripping pain in the bowels, of a twisting character, about the navel, in the back, and over the region of the left kidney. These pains were very excruciating, and lasted about four hours, then they would pass off for a time, leaving an uneasy or dragging sensation in the abdomen. In a few hours there would be another attack of the same character, which would pass off in the same way.

After this series of attacks had persisted for eight weeks, they suddenly subsided, and were followed by an interval of relief for three months, only two attacks occurring during this period of time.

I first saw this patient in the latter part of June, 1896, and found her very anæmic, intensely depressed, very much emaciated, and at that time there was some little trouble in retaining nourishment. The temperature at times was normal, or sub-normal, and again it would be elevated a degree. The urine was very scanty, and contained a little albumen and crystals of oxalate of lime. Her symptoms at that time, while very obscure, were more suggestive of kidney stone than any other disease.

In September, 1896, the severe paroxysmal pains recurred. They were of the same crampy, twisting character as those of previous illness, but after lasting from one to four hours, she would have a spell of vomiting, which was followed by relief. The second attack was nearly a month later, but after this the attacks recurred at shorter intervals of time until the patient had two or three seizures a day. In December, 1896, and January, 1897, the patient rapidly lost ground, and in the early part of February, 1897, a mass appeared in the left inguinal region about the size of a child's head. It could be felt through the vagina, and from its consistence might have been taken for an ovarian cyst, except for rapid development. The symptoms of intestinal obstruction now came on rapidly, and the patient at last agreed to submit to an exploratory laparotomy. She was taken to the hospital, and I opened the abdomen February 26th, 1897. The first

trouble experienced was in getting into the abdominal cavity, as adhesions were found connecting the intra abdominal contents to the abdominal wall, in fact it looked as though the whole abdominal cavity were a mass of adhesions.

The mass, felt from the outside, was simply an agglutination of coils of the small intestine together, and the whole peritoneum, as far as seen, was studded with tubercular nodules. There was no ascitic fluid present. The patient had fecal vomiting on the table, and her condition was truly desperate, so the intestinal adhesions on the left side, where coils were bound together, were simply separated, and the abdomen closed without further exploration of the cavity, and without drainage. The patient was put to bed in a desperate condition, and an early end seemed inevitable.

Much to my surprise and gratification, however, the symptoms of obstruction passed away at once, and outside of a little trouble from gas formation, the patient made a rapid and uneventful recovery. Since that time, now over nine years, this patient has been perfectly well, and has been free from discomfort in the abdomen. She has done all of her own work, and says she is perfectly well. An examination of the abdomen made a short time ago did not reveal any sign of intra abdominal trouble.

This second case of intestinal obstruction consequent upon tubercular peritonitis that I wish to report, occurred in the practice of my friend, Dr. H. L. Nietert, through whose courtesy I am permitted to present the appended.

Case II. Miss S. R., a young woman twenty-four years of age, and of German parentage, came under observation in July, 1905.

Family History,—negative. There was no tubercular or malignant history obtained. Patient's brothers and sisters healthy. Parents living.

Previous History. Usual diseases of childhood. Has always enjoyed robust health, save for an attack of "indigestion." Patient has always lived in the country where she found it necessary to do plenty of work. She has always been strong. Menstrual history normal.

Present Trouble. In July, 1905, while doing household duties, the patient was suddenly seized with more or less severe pains in the abdomen, which became somewhat localized in the lower right quadrant. The pains were of an intermittent character, and seemed to radiate upward and downwards from the appendical area. Inspection showed expression slightly anxious; cheeks flushed; abdominal contour not much changed, perhaps slight distention. Palpation revealed pulse 86; muscular rigidity not especially marked; both recti tense; no mass was palpable; fluctuation absent; no point tenderness; localized, tender area made out just to the right of the uterus, by rectal examination. Percussion failed to reveal any localized area of dullness.

The symptoms persisted; the temperature ranged between 99 and



100; vomiting was absent; a diagnosis of appendicitis was made, and the patient subjected to operation.

A small incision was made along the outer border of the right rectus. The appendix was found to be, apparently, normal. A more careful examination in the ileocecal region revealed a very peculiarly looking mass, perhaps four inches in thickness, and seven in length, everywhere covered with cicatricial tissue. The mass was lifted up out of the abdomen and carefully inspected. Upon finding that it apparently consisted of several coils of the lower portion of the ileum, and feeling confident that this condition explained the patient's symptoms, the mass was excised, and an end-to-end anastomosis made by means of a Murphy's button. The patient was returned to bed in excellent condition.

Examination of the specimen showed the latter to consist of thirty-three inches of ileum folded together, and firmly united by old adhesions. At the mid-point of the specimen was a stricture, which latter would scarcely admit the tip of the little finger. The stricture consisted of very dense connective tissue, which latter extended around the lumen of the intestines. At this time, it was held probable that the condition had followed the healing of a tubercular ulcer.

Ten to twelve days after operation the patient complained of vague, paroxysmal pains in the abdomen. Gradually, these increased somewhat in frequency and severity. The patient was out of bed three weeks after operation, but for some unknown reason the button failed to pass. Palpation in the region of operation induced pain. At times it seemed as though the button could be felt in the ileocecal region.

At the expiration of five weeks an attempt was made to cause the passage of the button, owing to obstructive symptoms. Purgatives, special diet, gentle massage, etc., were resorted to, but without success. Six weeks after the original operation, the abdomen was opened. Considerable quantity of clear fluid escaped. The parietal peritoneum in right lower quadrant was covered with small tuberculous nodules. The intestines were matted to the omentum, and together, and covered with miliary tubercles. The button was found at the site of anastomosis, and removed. Owing to the fact that the appendix was found matted in the newly formed adhesions, it was liberated and excised.

At the time of the second operation, the diagnosis was clearly that of tubercular peritonitis. Convalescence was slow, but eventually apparently satisfactory, and the patient is still doing well.

I have reported these two rare cases today, as illustrative of some of the very rare forms in which tubercular peritonitis may occur. Many theories have been advanced as to why simply opening the abdomen, or opening and separating adhesions cures a certain percentage

of the cases of peritoneal tuberculosis, but so far as I know none of these theories have been definitely proven to be correct.

The first case I recorded is particularly rare, as in fibrous tubercular peritonitis the leading authorities claim that, as a rule, surgery is of no benefit. However that may be, I am very glad that this case is an exception to the rule, and that we have now, after nine years, a live, healthy woman in place of a patient who could not possibly have lived more than a few hours without surgical relief.

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### PERICARDITIS WITH EFFUSION.\*

BY W. J. CALVERT, M. D., COLUMBIA, MO.

In this paper, I wish to call attention to some of the hydrodynamic factors involved in pericardial effusion.

The paper is based on a post mortem study of pericarditis with effusion, which was fixed in formalin and sectioned transversely, thus presenting the organs to view in their relationship at time of death.

Case: Body was that of a well developed male negro, thirty years of age. Anatomical findings were as follows: tuberculosis of the left lung and pleura; right pleura; mediastinal lymphatic glands; upper portion of the pericardium; posterior peritoneal lymphatic gland; and right adrenal. The heart was collapsed and the liver and diaphragm were displaced downward.

The following points are of interest: 1st. The collapse of the venæ cavæ. The section shows these veins collapsed from their entrance into the pericardium to the right auricle. 2nd. The collapsed condition of the heart and that portion of the aorta within the pericardium.

The collapse of the venæ cavæ within the pericardium indicates that intra-pericardial pressure can under no circumstances be greater than the pressure in the venæ cavæ. If the intra-pericardial pressure becomes greater than that in the venæ cavæ, that portion of the latter within the pericardium must collapse thereby blocking the flow of blood to the right heart and instantly producing death.

When fluid begins to collect in the pericardium it is under a pressure below that of the venæ cavæ, which is in inspiration negative and in expiration just normal, or faintly positive. When the pressure of the intra-pericardial fluid becomes equal to the intravenous pressure, the intra-pericardial pressure causes a partial collapse of the veins, especially when the intra-venous pressure is lowered during inspiration. This partial collapse of the veins, naturally causes venous obstruction and greater or less venous congestion. This congestion causes a rise in the intra-venous pressure, which pressure must be greater than

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\*Read by title at the annual meeting, Jefferson City, May, 1906.

the intra-pericardial pressure. Under this new relationship of pressures the blood flows practically normally to the right heart. Gradually the intra-pericardial pressure increases causing an increasing intra-venous pressure; but always less than the intra-venous pressure. There is a limit to the possible, intra-venous pressure due to obstruction, consequently there must come a point when, with an increasing intra-pericardial pressure, the intra-pericardial pressure will for the last time approach in degree the intra-venous pressure. When this point is reached the intra-venous pressure during inspiration becomes less than the intra-pericardial pressure. During this period the intra-pericardial pressure causes the veins to partially or to completely collapse thereby blocking partially or completely the flow of blood to the right heart. When expiration begins the intra-venous pressure rises above that in the pericardium. Now the veins open and the blood flows more or less freely to the right heart. So the ever changing relationship of pressures in the pericardium and veins continues until the intra-pericardial pressure becomes sufficient to permanently block the veins, when death ensues.

As it has just been shown the intra-pericardial pressure can never be greater than the intra-venous pressure without causing death, it follows that the pressure in the pericardium must, during life, remain quite low and consequently as such have but slight if any effect on the heart's action or degree of distension. The flow of blood through the veins to the right heart is mostly responsible for the heart's manifestations. If very little blood flows to the right heart it must naturally remain contracted for there is nothing to distend it. If the normal amount of blood enters the right heart it must dilate to its normal size as the slight intra-pericardial pressure is not sufficient to prevent its dilation. When the intra-pericardial pressure is permanently positive, it naturally offers a proportionate resistance to the dilating heart. On account of the delicate intra-thoracic equilibrium this slight pressure has more practical effect than is at first apparent.

When the intra-pericardial pressure is at its maximum and the arterial pressure low on account of the small amount of blood entering the left heart that portion of the aorta within the pericardial sac becomes partially or completely collapsed, and naturally offers some resistance to the passage of blood. This is, however, of minor importance because the left ventricle can easily overcome the intra-pericardial pressure, and because the blood is simply transferred from the ventricle to the aorta or the ventricle becomes smaller as fast as the aorta enlarges, consequently the value of the contents of the pericardium is unchanged until the blood pass beyond the pericardial walls.

The flow of blood from the veins to the right heart is the most important factor in determining the state of the heart and general circulation.

When the intra-pericardial pressure begins to occlude the veins



during inspiration a diminished quantity of blood flows to the right heart during inspiration. Consequently a diminished amount of blood must flow to the lungs with each systole of the right heart. And so a diminished amount of blood to the left heart and systemic arteries. This would, other factors remaining equal, give a lowered arterial pressure, smaller pulse wave and a rise in pulse rate.

While inspiration has caused a partial or complete obstruction to the veins, the intra-venous pressure has reached its maximum from congestion. So that when the increased pressure incidental to expiration is added, the intra-venous pressure rises above that of the pericardium, the veins are opened and blood flows more freely to the right heart. Consequently to the left, thence to the general circulation. This increase of blood in expiration, other things being equal, causes a rise in arterial pressure, a higher pulse curve and a slower pulse rate. Or in other words *pulsus paradoxus* must follow when the intra-pericardial pressure remains slightly below the maximum and slightly above the minimum intravenous pressure.

The venous congestion, mechanical in origin, resolves itself into a compensatory congestion by means of which a relatively normal amount of blood under an increased pressure flows through the constricted *venæ cavæ* to the heart. When the intra-pericardial pressure approaches the maximum venous pressure, the *venæ cavæ* within the pericardium become more constricted without a corresponding increase in venous pressure or the venous compensation begins to fail or broken compensation is present. As shown above, *pulsus paradoxus* is present when the two pressures are about equal. It follows, then, that a distinct *pulsus paradoxus* in pericarditis with effusion is a sign of a broken compensation in the venous congestion and that the amount of blood entering the heart has been reduced practically as much as is possible, and at the same time to maintain life. At this time a general *anæmia* has developed which may be responsible for many of the pathological changes noted in pericarditis with effusion.

From a prognostic point of view *pulsus paradoxus* considered in conjunction with the activity of the lesion may give valuable information. If the process is active it will require, at most, only a few hours for the intra-pericardial pressure to close the veins after a pronounced *pulsus paradoxus* has been developed. The reverse is true in a case of long standing. Here the degree of *pulsus paradoxus* may be of value. Even in a normal individual there is a slight difference in the pulse curve in inspiration and expiration. But this difference is very slight. *Pulsus paradoxus* may vary from this physiological difference to the point when in inspiration the pulse is entirely suppressed. The various degrees depend on the nearness of equality between the intra-pericardial and intravenous pressures. A marked or pronounced *pulsus paradoxus* is one in which during inspiration no peripheral pulsations occur.

From a therapeutic point of view a pronounced pulsus paradoxus indicates the necessity for immediate reduction of the intra-pericardial pressure.

This hydro-dynamic consideration of pulsus paradoxus clearly indicates its prognostic and therapeutic value.

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## PERCENTAGE MODIFICATION OF MILK FOR INFANT FEEDING.\*

BY GEORGE C. MOSHER, M. D., KANSAS CITY, MO.

The present status of the question of artificial feeding of infants is a matter of scientific, therapeutic accuracy through percentage modification of milk. This is the outcome of fifteen years work by Dr. Thomas Morgan Rotch, of Harvard Medical School, who is the originator and chief exponent of the system of feeding. Its great value can best be appreciated by the endorsement of Dr. L. Emmett Holt, Professor of the Diseases of Children in the College of Physicians and Surgeons, New York; Professor William Perry Northrup of the University and Bellevue Hospital Medical College, Department of Diseases of Children; and other men of similar standing in the pediatric world.

The first proposition in feeding young children will admit of no argument, that the ideal food is the healthy milk of the breast of a normal mother; but in this day of strenuous living, both among the young matrons of society who find themselves unable to furnish alimentation suitable for the growth and development of their offspring, and also among the mothers whose lives are cast in the other extreme of the social radius, those with insufficient food and care in the lying-in period, the demands of existence driving them early to toil, the mother's milk proves a failure. Even in the well-to-do middle classes, as civilization increases, the number of mothers who can nurse their children proportionally decreases.

Recent statistics in regard to the mortality among children show that one-half of all those born die before the age of five years. A large number of these perish in the first twelve months of existence, many of them from disorders of digestion and the diseases growing out of defective metabolism; among these are rachitis, infantile atrophy, infantile scorbutus, and various gastro-intestinal lesions.

No other question, I believe is such a trial to the young practitioner, as the problem of artificial feeding of infants; nor does long experience put his elder brother in a position of positive security in advising what shall be the substitute food. Manufactured foods, including all powdered preparations and condensed milk, have been tried and been found anything but successful, not but that we may have known

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\*Read before the Kansas City Academy of Medicine, Kansas City, Mo.

in our own, individual experience instances which contradict this statement.

Without doubt, the first adequate substitute is the milk of another mother, a wet nurse. This has many objections. First, to know that the wet nurse is free from tuberculosis, specific disease, and other physical ills. Second, that her disposition and training fit her to take the place of the mother. Realizing, as she does, her power in the family circle where she sits enthroned because of dependence on her, there is danger of yielding to the temptation of gormandizing, of being lazy or ill tempered, and becoming the tyrant and terror of the household. These, and many other objections must be raised to the wet nurse as being, in America, an ideal substitute. Abroad, where a large peasant class can be drawn on for nurses of placid manner, healthy condition, and lack of ambitious longings, this part of the subject may not be difficult to settle.

The discussion of mare's milk, goat's milk, etc., in this country is fruitless, because of lack of supply. In St. Louis an effort was made, it is asserted, last year, to import two hundred Swiss milch goats to hire out for infant feeding. In our modern style of living in apartments, in flats, the goat might be kept secreted in the ice box on the back porch if the eagle-eyed janitor were judiciously seen. However, this plan is still *sub judice* and has not been demonstrated a success.

Then we come to the only available substitute for the mother's milk, which is the milk of the cow properly cared for, and protected from contamination by bacteria from the minute of its production to the moment of consumption by the child.

Heretofore, little or no attention has been paid to the source of the milk. Dr. Rotch has insisted on a herd of healthy cows, Holsteins preferred because of the vital element, which the experiments at Storrs Station, and those of Professor Carlisle and Professor Haecker, of the University of Minnesota, have shown the milk of the Holstein cows possesses in a phenomenal degree. While not holding that the digestion by the human baby is to be compared to that of the calf, there is an analogy which is at least suggestive.

This herd should be tested for tuberculosis and other diseases. It should be housed in a well-lighted stable free from dust and dirt; cows brushed and udders wiped dry before each milking, with a personnel trained in the elementary knowledge of practical bacteriology as regards contamination; milkers delivering the milk to a dairy house where no odor of the stable is tolerated, and the dairyman then aerating and cooling the milk to 40 degrees immediately; promptly delivering to the laboratory, carefully protected from contamination en route, where the modification is done in the likeness of mother's milk.

For much of the information as to the care of the herd, barns, and technique of clean man and beast, to keep low the bacterial count, the medical profession is under obligation to Messrs. George H. Walker



and G. E. Gordon of the Walker-Gordon Milk Laboratory of Boston. They say milk undergoes the greatest risk of infection in the first ten minutes of its existence, at the milking, before it is put into the sterile bottles and sealed.

Quoting from Dr. Northrup, "The best results in preparing a substitute feeding for a city's needs, require a central head, a director, and an organized company to carry into execution his orders." This places the whole line of development, from the farm to the nursery, under one responsible control. In addition to the working force, this system requires an inspecting chemist, a bacteriologist, a veterinary surgeon, and the very important medical commission, appointed by the official medical society, whose sole function is to advise and find fault.

The American system of percentage feeding, or exact laboratory feeding is a copying of nature's formula in milk fresh from the cow, put up in the laboratory and prepared according to the prescription of the physician, which may be changed to fit changing conditions and changing needs. Breast milk is not always good, does not always agree. It varies, but cannot be changed.

Percentage milk is not a patent food, not a powder to be moistened and fed, not a commercial article warranted to keep in any tropical climate forever, but simply clean cow's milk, dispensed only under prescription of the doctor who decides the modification to suit the condition of the child. It is impossible for each physician to conduct his own laboratory, hence the necessity for having a general laboratory for the use of the profession.

Not every child needs the same percentage of the fats, sugars, and proteids in its feeding. The simple dilution of cow's milk with water, and the adding of a little sugar of milk cannot meet the demands of the digestion, nor be considered a proper modification, because the relation of fat, proteid and sugar is not in this manner sustained.

The medical profession has found that scientific modification on exact percentages must be done to secure a substitute food with which to replace the breast milk of the mother.

The methods pursued by Dr. Rotch, in advancing the system of modification by percentages are very interesting. Briefly they are:

1st, Ascertaining the percentages of milk ingredients, especially of fats, sugars and proteids in the mixed milk of herds. This requires an examination by modern methods of all previous analyses of milk, from which our own conclusions are to be drawn.

2nd, Ascertaining the percentages of similar ingredients in breast milk. From a paper published in the Journal of the American Medical Association, it is seen that these were determined in cases of healthy women, private patients of Dr. Rotch; in all, five and one-half litres being collected for the analysis.

3rd, Ascertaining not only the percentages of the fats, sugars, and

proteids, but ascertaining, as far as possible, the physical and chemical constituents of the milk, the proteids, and all points relating to their digestibility.

4th, Ascertaining, since there has been found so much variation in individuals, the corresponding percentages of fats and proteids, designating them "high average" and "low average" breast milk.

Cow's milk has less variation. As Dr. Northrup says: "This systematic study has been a life work, and the work is worth it." Having ascertained the percentages in cow's milk and in the "high average" and "low average" breast milk as to fats, sugars and proteids, a duplicate, as near as possible, is evolved out of the former as a substitute for breast milk. A large number of tables of these results are published by Dr. Rotch, and are now the property of the profession.

Approximately, cow's milk contains 4 per cent. fat, 4 per cent. sugar, 4 per cent. proteids. High average breast milk contains 4 per cent. fat, 7 per cent. sugar, 2 per cent. proteids, thus showing the same amount of fat, more sugar, and half the amount of proteids.

The problem is to dilute proteids one-half and keep the fats the same.

To consider only fats and proteids; first, the fats are the same in each; proteids one-half in mother's milk. All the fat can be removed by centrifuge. To readjust the proportion, the proteids should be diluted, and then put back in proper proportion. While diluting fat-free milk containing the proteids, the required percentages of sugar and lime water may be included. The fat is removed from fresh new milk in the form of cream, the percentages varying according to the adjustment of the centrifugal cream separator. The remaining milk, fat-free, is diluted to the desired proportion. Approximately, F. 4 per cent., S. 4 per cent., P. 4 per cent., becomes 0-4-4, and the cream 8-4-4. Fat-free milk is 0-4-4, which, when diluted with equal volume of water, makes the percentage content of proteid in a given volume of milk just half as much, or 2 per cent. Having removed the fat and diluted the proteids, we have 0-2-2. To transform cow's milk, 4-4-4, to human milk, 4-7-2, then requires:

1st, Removing all fat.

2nd, Diluting fat-free milk one-half.

3rd, Putting back the required amount of fat.

4th, Sweetening with sugar of milk.

For all modifications, except whey mixtures and prescriptions calling for combination of high fats and low proteids, a 16 per cent. cream is used. For whey mixtures and combinations like that just mentioned, a 32 per cent. cream is used. Any required diluent may be ordered in modified milk, as a cereal, fresh whey, etc.

Further problems peculiar to the adaptation of cow's milk to breast milk formula are met, such as, the qualitative differences of proteids. To this consideration, especial attention has been given in

the years of 1904 and '05. The proteids of both cow's milk and breast milk are made up of caseinogen and whey proteids (lactalbumin). Not only, is the amount of proteid which constitutes the nitrogenous elements of both milks, twice as abundant in one as in the other, but they are again made up of two distinct elements which differ in the two milks, breast milk and cow's milk.

Thus, the proteids of cow's milk differ from those of human milk not only in quantity, but in quality; and not only in absolute percentage, but in the proportion of their two chief ingredients.

The woman can compete in fat making but not in cheese production, the proteids of the cow excelling by nearly five times the amount of caseinogen. Breast milk contains two and one-half times as much whey proteids.

The laboratory is prepared to re-adjust qualitative differences. The remaining modifications are very simple. The milk is to be diluted, the sugar solution added. To produce an alkaline reaction, lime water replaces a part of the diluent.

The proper modifications of milk can only be effected by skilled persons in a proper laboratory. In fact, the laboratory becomes in the feeding, as stated by Dr. Rotch, what the druggist is to the dispensing of medicine. No doctor asks the druggist to send him a medicine suitable for the illness of his patient, but orders the remedy he requires, and the druggist fills the prescription.

The modified percentage milk, packed in iced crates, can be delivered to the house, or shipped by express, or sent on a week's voyage by sea, as has been done by the Walker-Gordon Milk Laboratory.

The product of one American sanitary dairy went across the ocean and took first prize at Paris 21 days after milking. It was simply clean, sweet milk iced, no sophistication, no preparation other than the absolute observance of sanitary precautions. These laboratories are now established in 24 cities. In addition to the regular modification in the laboratory, milk for home modification is sold in quart bottles for a price within the reach of working people. A milk fund for the poor is also a part of the establishment, the funds being furnished, usually by patrons who, grateful for the benefits to their own children, gladly aid in furnishing percentage milk to the unfortunate mother unable to buy it for her baby.

It is to be hoped that the profession here can soon have the same opportunity to give our infant patients the advantage, which our brethren in the Eastern cities have long ago enjoyed, of prescribing the only scientific substitute for mother's milk.



## THE TREATMENT OF HEMORRHOIDS.\*

BY W. H. STAUFFER, M. D., ST. LOUIS.

Among the many diseases to which flesh is heir, it might be said that there is none of more common occurrence, more annoying, or more acutely painful than hemorrhoids. Hemorrhoids have been encountered at all times, in all climates, in both sexes, at all ages, in both the robust and the debilitated, and in all walks of life.

It is my intention to confine myself strictly to the subject, although there is much that might be said relative to the etiology and pathology of this very common disease. The treatment naturally resolves itself into palliative and operative depending upon the pathological condition existing and the circumstances and wishes of the patient. Resort to tentative or palliative measures in conditions which may be radically cured by operations, little if at all dangerous, is not considered conservative surgery today. There are many patients, however, in whom radical measures are out of the question, on account of complicating circumstances or diseases. Physical and nervous conditions, business and social arrangements, and sometimes the absolute lack of moral courage, frequently render it impossible or inadvisable to operate for hemorrhoids.

Some hold that the palliation of hemorrhoids is unscientific, and only done for sordid motives; that radical removal is the only method of treatment. Aside from the fact that operation is often contraindicated, the patient himself has some right to choose whether he will be operated on or treated by palliative means for conditions in which life is not endangered. It is true that hemorrhoids are likely to recur after palliative treatment, but it is also true that many patients treated by these methods go for years without any recurrence, and some never have it.

The fact that the large majority of those who suffer from rectal diseases in the United States today are treated by irregular practitioners, is due to the inability or refusal of the general surgeon to apply palliative measures properly. No operative method is without some immediate or remote danger, therefore, while a patient may be told that there is practically no danger to his life, there is always the possibility of results which are altogether undesirable. Of course such results are very improbable, but they do occur, and patients hearing of them become unalterably opposed to operative procedures, and the radical methods have been frequently brought into disrepute by being forced upon such individuals who suffer from imaginary disabilities and discomfort in the rectum forever afterwards. In cases, therefore, with these exaggerated fears and antipathies toward an

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operative procedure, it is better to adopt the palliative method, explaining thoroughly that they are not radical cures but that by repetition they will give relief and maintain comparative comfort as long as they are continued.

The cardinal principles in the palliative treatment of hemorrhoids consist in the prevention of prolapse and arrest of hemorrhage. The hemorrhage is always the most alarming symptom to the patient, and, as it may be excessive, it should be considered first. It is rarely difficult to stop the flow. Rest in horizontal position, cold applications, astringents, and local anesthetics may be used. The many proprietary preparations on the market, guaranteed to cure piles of all kinds, are sufficient evidence that no one remedy is adapted to all cases. The intelligent physician will select his own remedy, after making a definite diagnosis. The chief object is to prevent its recurrence.

In the first place, obstructions to the portal circulation should be remedied at once, whether they be in the line of the vessels or in the liver itself. The diet should be regulated as to quality and quantity. Less food and more exercise is usually good advice in these cases, but there are exceptions to this rule. Restriction in the use of carbohydrates and alcohol is always necessary.

Having concluded that operative interference is indicated, the first step is to make a definite diagnosis and determine the exact pathological condition. It is absolutely wrong and extremely unsurgical to treat all cases of piles by the same operation, for piles vary as much as other diseases.

Of the large number of operations devised by various persons three or four are, in the writer's opinion, worthy of consideration. In general terms, it is well to remember that that operation is best which sacrifices the least tissue, is painless and does not impair function. Cicatricial tissue should be avoided if possible, as it predisposes to ulceration, with all its unfortunate results. Suffice it to say that at least 60 per cent. of cases of cancer of the rectum give a history of a prior ulceration.

At least thirty-six hours should be taken for the preparation of the patient for operation. The intestinal canal being thoroughly emptied and the parts rendered as nearly aseptic as possible. The use of local anesthetics for operative interference in this region has kept pace with all departments of surgery. Like all other good things, there is danger of overdoing. It has been conclusively demonstrated that they are by no means devoid of danger, however skillfully employed. Their use is largely responsible for incomplete and bungling work. The performance of so-called minor operations in the office of the surgeon, however well equipped, with the exception of external hemorrhoids, is not to be encouraged. It is impossible to prepare your patient properly or care for him adequately afterwards.

For general anesthesia, I prefer and use ether, unless contraindicated. The patient should be entirely under its influence before beginning any operation, and it is always well to advise the anesthetist when you are ready to begin, so that due caution may be exercised.

The violent and extreme dilatation of the sphincter ani is unnecessary, and often harmful. Any undue traumatism predisposes to infection or tissue unrest which is the proper name for that somewhat vague term, inflammation. Unnecessary manipulation and violence to tissue, no matter what operation is practised, often add more to the time and discomfort of convalescence than the operation itself.

The operation of excision by means of one of the various methods devised, and the union of the parts by catgut sutures, is no doubt the ideal method, but the great difficulty in procuring an aseptic field and keeping it so will always limit this procedure to selected cases, such as mixed and external hemorrhoids, especially those associated with prolapse of the mucous membrane. Only the pathological tissue should be removed, and no attempt should be made to substitute a major operation when a minor one is indicated. All bleeding must be controlled, and the stitches so placed as to secure good coaptation, and where they can be kept clean without causing undue discomfort.

Primary union can reasonably be expected if the after treatment is properly attended to. This operation, however, is contraindicated if the ulcerated tissue cannot be eradicated or the hemorrhoids are located so high that the field cannot be inspected during convalescence.

The clamp and cautery operation has come to stay, and is considered by many eminent men the only one worthy of consideration. It is especially well adapted to chronic cases with relaxed sphincters, where contraction is much to be desired. The technique of the operation is known to all of you and will not be discussed, suffice it to say, that the ultimate result and comfort of the patient depend more upon its proper performance and after treatment than any minor operation in surgery. Its principal objection is the large amount of cicatricial tissue frequently resulting.

The hypodermatic method of treatment employed by some American surgeons demands some attention. The fact that it was and is employed by itinerants should not deter us from investigating the method and the results obtained. Drs. Kelsey of New York, and Andrews, of Chicago, have given it a fair trial, and now only use this method in certain selected cases of internal hemorrhoids with long pedicles, and then only in their quiescent stage. Dr. W. P. Agnew, of San Francisco, has been its most persistent and consistent advocate, and deserves much credit for the unselfish manner in which he has separated the wheat from the tares. Carbolic acid is the principal ingredient employed, and experience has taught us that the stronger solutions are much to be preferred to the weaker ones. Its action is to produce devitalization and tissue necrosis. Can we not secure the



same result more satisfactorily by other methods long in use, is the question to be settled by every operator.

The ligature operation, as performed by the ancients, resembles, in many respects, the operation as done today. It comes down to us recommended by such of the ancients as Hippocrates and Galen. The majority of authors in later years and up to the present day commend it as being one of the best operations for the cure of hemorrhoids. For instance, it is endorsed by Sir Astley Cooper, Burke, Cripps, Van Buren, Bodenhamer, Allingham, Mathews and others. The results which have followed this operation deserve the highest commendation.

In the ligature operation, Galen recommended the excision of that portion of the pile external to the ligature. Others simply placed a ligature around the pile and let it slough off, while some transfixed the center of the tumor with a double ligature and tied it on both sides.

The surgeons of today differ as to the best methods of applying the ligature. The majority, however, prefer the operation which was devised by the late Mr. Salmon, and popularized by the lamented Allingham, of St. Mark's Hospital, London, where it has been practiced for the last fifty years. This procedure differs from Galen's method only in so far as to exclude the nerves from the ligature and lessen the after pain, which is done by severing the skin and mucous membrane at the muco-cutaneous junction and applying the ligature in the sulcus thus made.

The merits of any operation can only be properly judged, by considering both the good and the bad results as achieved by a competent operator. It is unfair to any operator or operation to select the weakest point and criticize the work when poorly done by a novice. Scientific honesty should actuate our motives, and a sincere desire to employ the best methods in each individual case entrusted to our care.

I have not attempted to exhaust this inexhaustible subject, but have only hoped to elicit a discussion on this very common affliction. It is devoutly to be wished that the successful treatment of hemorrhoids and other rectal diseases will the better enable the ethical physician to forestall and root out the itinerant and advertising local specialist, as well as to compete with his wide-awake fellow-practitioner, and in this way retain his own clientele, secure the fees arising therefrom, and maintain his social standing and dignity in the community in which he resides.

Humboldt Building.

# ANO-RECTAL FISTULA.\*

BY JEROME D. POTTS, M. D., ST. LOUIS.

The subject chosen for this paper is by no means a new one, and I do not presume to be capable of saying much that is new upon it. I shall, therefore ask the indulgence of the Society while I review some of the facts known to proctologists.

In early medical literature we find it pretty thoroughly discussed and understood, and all down the ages we find it receiving more or less attention at their hands. The columns of many of our great daily and religious papers have been repeatedly filled by the quack, rectal specialist, with his minutely detailed enumeration of its symptoms and his certain and painless method of effecting cures. In fact, so much has been written upon the subject, and so conspicuously has it been placed before the public that it is great wonder we do not find nine out every ten people suffering from it. Mankind, indeed, is fortunate in not being susceptible to all the evil influences that surround him, if familiarity with the clinical history of disease processes rendered him capable of simulating disease he would be constantly ill. It is said that "man may become like that which he worships" but no one has had the temerity to say that he becomes like that which he dreads. Mental processes may affect bodily nutrition in a general way but we do not believe that they can in a local way. Men do not have fistula because they know all that the papers and almanacs say about it, but because of the entry into their organisms some disease producing elements they are unable to successfully combat. A germ, or germs pass the sleepy, epithelial sentinel and bid the phagocytic army enter into a hand-to-hand conflict for supremacy. Sometimes the invading host is completely routed; often a few stragglers are left to continue the fight. Ano-rectal fistula, unlike pruritis ani, is real pathological entity. It is no mere symptom of some indefinite pathological process. There is something to it that may be seen and felt by the sufferer and the surgeon.

It is truly no respecter of persons or conditions in life. The prince in his palace with all his retinue of attendants about him, and with perfect hygienic surroundings falls a victim like the hobo in his hovel. The greatest number of victims, however, are seen among the lower classes and those who are addicted to the use of alcoholics.

It is decidedly the most common rectal disease affecting adults that comes under the observation of the proctologist. The reason for this is not quite clear to my mind, but it is possibly due to the fact that it is less successfully treated by the general practitioner. Certainly, it can not escape recognition by the careful observer. The reports from the

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out-patient department of the various hospitals of this Country and England show that one person in every four with rectal disease has a fistula. Ten hundred and fifty-seven cases of fistula were seen among four thousand cases of rectal disease in St. Mark's Hospital of London.

It is no wonder, then, that the advertising rectal charlatan makes so much ado about anal fistula. It is a source of much remuneration to him and he never fails, because of modesty, to work it for all it is worth. Hypersensitive olfactories never cause him to disregard rectal symptoms. Every one that consults him receives a more or less careful examination of rectal region before he leaves the office. I would that this were true of every ethical member of the medical profession. The field from which they draw so many fat fees would rapidly grow smaller and smaller until they were forced to seek some more honorable means of making a living. This field legitimately belongs to the ethical practitioner and he should not hesitate to lay claim to it.

Fistula in ano may be defined as a pathological communication between two more or less distant points, one or both being upon the rectal mucous surface or upon the peri-anal integument. This communicating tract may lie immediately beneath the mucous membrane or skin, or it may penetrate the deeper peri-anal or peri-rectal structures. The length and general course of the sinus is a question that will have to be settled in each case. Sometimes it is long and straight, at other times it is short and tortuous.

*Location* of opening is frequently of some advantage in enabling the surgeon to determine the usual course of the tract. Goodsall has said that, when the opening is found in the posterior half of the anal ring, the course of the tract will be directly upward, or upward and backward along the fibres of the levator ani muscle. If the opening be found in the anterior half segment, the course of the tract will be directly upward or along the anterior wall of the gut, or around-encircling-the gut. No general rules for finding the tract can be laid down. Nothing less than a definite, working knowledge of the anatomy of the parts, and an unlimited experience, can make one expert. Rules are a bad thing for the surgeon unless "read between the lines" with a great deal of common-horse, sense. They are frequently misunderstood and misapplied.

The *Classification* of fistula seems to have been attended with more or less confusion in the minds of medical men. Often, when speaking of one of the so-called blind types, it is difficult to determine which end is closed. Proctologists, however, are pretty generally agreed upon the following classification, viz.:

*Complete fistula*—with one external and one internal opening.

*Incomplete fistula*—blind Internal—with no external opening.

Blind External—with no internal opening.



*Horse-shoe fistula*—with two openings near each other—canal horse-shoe in outline. Internal or external.

The name, recto-vesical, recto-urethral, and recto-vaginal indicates the location of the respective openings and probable course of the tract.

The complex fistula consists of multiple sinuses and numerous openings, or one sinus with many radiating canals and one opening.

The line of demarkation between the internal and the external types of fistula is universally understood to be the muco-cutaneous junction. The etiological factors in fistula are practically the same in all cases, save in those which result from punctured wound about the rectum. An abscess, tubercular or otherwise, forms, it opens spontaneously or is imperfectly treated by the surgeon and a discharging sinus is left. The more or less frequent movement of the parts through or over which it passes, does not permit it to heal. Granulations after granulations spring up only to be broken down by muscular movement or by pressure of the descending fecal mass. Sooner or later new granulations cease to form, the patulous canal, lined with pyogenetic membrane, underlain with lardaceous tissue, surrounded by an infiltrated, indurated mass corresponding with its course, is left to try the skill of the surgeon.

Many and widely differing theories have been advanced for the failure of fistulous tract to heal spontaneously, the most rational of which may be summed up in these words, constant movement of the parts and frequent reinfection of the wound. The patient's general physical condition may be such that local pathological processes are not easily overcome.

The diagnosis of fistula should be attended with little difficulty. Frequently, this is made by the patient before he consults the physician. If doubts remain in his mind these can soon be eliminated by the careful examiner.

The first point to demand consideration is the *location* of the opening. In the great majority of instances this is located at the superior border of the external sphincter muscle. It may, however, be located at any point up on the rectal mucous membrane, or upon the peri-anal integument some distance from the anal margin. The pus in its effort to escape seeks the point of least resistance, and, since this is along the course of the various muscle fasciæ that surround the perirectal spaces, the opening is found where the fibres blend or converge. Pus that forms in the ischio-rectal spaces is limited, in front by the fascia of the levator ani muscle, and, since these pass forward and downward to blend, in part, with the fibres of the external sphincter, it is readily understood why the opening is found at this point. In rare instances the opening is located at the point where the fibres of decussate to pass around the rectum and form the third sphincter. If the pus forms in the vesico-rectal space the opening will be situated

in the anterior half of the anal ring at the lower border of the sphincter, the pus being forced to this point by the blending of the deep and superficial perinale fasciae.

The symptomatology of fistula needs no extended notice or discussion in this connection. All who have read the late standard works upon the subject of proctology are sufficiently familiar with these. I should, however, deem this paper incomplete did I not in my own way enumerate and discuss the most important signs and symptoms. It is hardly possible for any one to become too familiar with an intelligent interpretation of this or any other disease process.

The first diagnostic sign noted by the patient is the presence of undue moisture of the parts about the anus, and some stain upon the clothing. This stain may be yellowish from the presence of pus of fecal matter, or it may be brownish or black from the presence of blood. If the fistula be one of the complete types the escape of gases or fecal matter through the tract, independent of the defecatory act, may be noted. The patient's curiosity being now aroused, he seeks an explanation of the foregoing signs by the use of a hand mirror. A small red, granulating point, from which a few drops of pus or blood exudes is found, and he is convinced that some thing is radically wrong about his anus. He visits the surgeon and relates a history of more or less vague discomfort, or acute lancinating, throbbing pain in the region of the sacrum, coccyx, bladder, or perineum followed by a discharge of pus and blood, with subsidence of the primary symptoms. Acute pain is not again noted except during the passage of foreign bodies or fecal matter, or when the tract is obstructed and fails to pour out its secretions. Discharge of pus means destruction of tissue, and it is the function and duty of the doctor to find out how extensive that destruction may be. Rectal symptoms must not be ignored or treated indifferently, however mild they may be. The real significance of every one must be determined before the patient is allowed to leave the office. The patient expects this of him. The doctor must not disappoint him if he expects to hold his confidence, respect, and patronage.

It is presumed that every surgeon be he specialist or not, is sufficiently familiar with the different positions patients may be placed in for rectal examination, so we pass to a few words of caution in regard to the methods of making that examination.

First, I will say, with regard to the use of the probe in exploring the sinus, that extreme gentleness is an absolute necessity.

The infliction of unnecessary pain must be avoided. The probe must be allowed to find its way without force because of the great danger of breaking down the granulations and subjecting the patient to infection by some of the ever present pathogenic bacteria. Any man can take up a probe and push it through an opening in some direction, but it takes an expert to make it follow the tract without the use of some force. In the great majority of cases it is better to give to the

probe a simple curvature before introducing it. Sometimes it will be necessary to produce a compound curve in order to follow the tract with perfect ease. Occasionally some advantage is gained by introducing the index finger into the rectum, but this should not be done before the probe has passed above the sphincters, because of the danger of disturbing the relation of the parts. Special probes are rarely necessary. The pure silver one can be bent to any desired angle and answers all practical purposes.

It should be remembered that, when the opening is situated in the anterior half segment of the anal ring, the sinus runs directly upward or upward and backward toward the sacrum. The slightly curved probe should enter it with perfect ease. When the opening is situated high up in the bowel some difficulty is often experienced in introducing the probe. Under these conditions the index finger must be the sole guide, and just here, let me say that a well trained, intelligent, index finger can not be over estimated. It should be made thoroughly acquainted with the normal density and mobility of the mucous membrane and all its contiguous, and underlying structures. Abnormal conditions about the rectum can not be fully appreciated without it. It is frequently true that the opening can neither be seen nor felt: the cord-like, or pipestem-like induration must then be followed to its extremities by the finger, where the surface is searched with the probe for the opening.

The ordinary rectal speculum is of very little value in the examination of these cases. I rarely use one for this purpose. Much more can be seen through the tip of a well educated finger than through the best proctoscope. With this consideration and interpretation of the signs and symptoms, we pass to a brief consideration of the prognosis of fistula. In the great majority of cases recovery takes place sooner or later under appropriate treatment. Those which result from tuberculous abscess being the most tardy in healing. Where pulmonary or general tuberculosis exists the healing process may be delayed for months even under the most thorough treatment. In this class of cases the surgeon does well to be very guarded in the expression of his opinion as to the length of time it will require to effect a cure. Often, to the great disappointment of his patient, he will find that he has made it too short.

The question of treatment is one that occasionally puzzles the surgeon. Often conditions seem to indicate and justify one form of treatment when the results secured thereby cause him to wish he had chosen some other. The fact is that every case of fistula is a law unto itself in so far as remedial measures are concerned. No fixed rules can be laid down that will apply to every case. The nature of the case, and the patient's physical condition, and the doctor's experience must enable him to determine what course to pursue.

Under two heads palliative and surgical, may be included all the



methods of treatment known to proctologists. The first of these embraces all methods of treatment in which the knife is not used. They may consist of simple cleansing of the tract with sterile water, the injection of some medicinal agents, or the more radical means of cleansing the tract with the curette.

The injection into these tracts of solutions of bichloride of mercury, nitrate of silver, and ichthyol, and tincture of iodine has been tried with varying degrees of success. In properly selected cases there is no doubt about accomplishing good results from some of these injections. The method should not be invariably condemned because the advertising charlatan uses it, partly as a means of securing patients. Many of these victims have a "holy horror" of the knife and will not place themselves under the care of one who will not promise to treat them without it. Frequently, they will readily agree to submit to a form of treatment that causes them much more pain than the knife.

The desire of a large number of these patients to escape the knife put me to thinking, and following out a well established principle in surgery, I adopted what has proven to be a simple and reasonably satisfactory method of treating them. The two essential features of this method are *absolute cleanliness* of the sinus and *perfect rest* of the surrounding parts. No sinus will fill up with healthy granulations in the presence of multitudes of pathogenic bacteria. These must be removed, not only from the surface of the sinus but from the tissues which constitute its wall. Chemical agents which impair the vitality of the tissues, although capable of destroying the bacteria, and leave the surface covered with shreds will not accomplish the desired end. These devitalized shreds must come away and in order to do so a discharge from the tract must be continued.

A "surgically clean" canal must be secured before we can expect agglutination to occur however quiet the thoroughly coapted surfaces may be kept. Various means have been suggested for accomplishing this end, but the only satisfactory one I have found is the spiral-douche-curette. With this it is possible to go over every particle of surface without danger of penetrating the wall of the sinus.

The great flexibility of the curette allows it to readily conform to any irregularity in the shape of the canal. Multiple diverticula, if any, may be entered and cleansed before withdrawing it, the debris being washed out by a stream of flowing water. The entire interior of the canal wall is shaved off clean, and not left covered with hanging shreds of tissue. No infectious agents are left in it. The sinus is "*surgically clean*" and ready for the subsequent steps in the treatment, as follows:

A piece of heavy rubber drainage tubing, with lumen of one-fourth to three-eighths inch in diameter, and from four to six inches in length, is introduced into the rectum. About two inches of this

tube are left projecting from the anus. Around the portion within the bowel is carefully packed a sufficient amount of gauze, which has been previously saturated with warm sterile vaseline, to fill the rectal canal. Around the projecting end is wrapped sufficient gauze to make a roll one inch in thickness, and this is held in place by threads passed through from the inside of the tube. Gauze is now placed around the roll to support it, and the whole is held in position by a carefully adjusted T bandage. Perfect coaptation of the sinus wall is thus secured under pressure, and agglutination results in from three to five days.

The tube allows the escape of the gases—if necessary the escape of fecal matter—and the pressure from above, from below, and from within holds the previously divulsed sphincter in a condition of rest. The tolerance of the mucous membrane and sphincter is something remarkable. Sometimes it will remain in position for several days without exciting the least irritation. This mode of treatment is applicable to almost any type of fistula, except those which connect some other organ with the rectum.

Other methods of treatment, such as, *excision of the tract* with closure of the wound, and *laying open the tract* and treating as an open wound have their advantages in a certain class of cases. In fact, some of them can be treated successfully in no other way. This is particularly true of the internal incomplete type with the opening at the upper extremity. Cleaning it out through a new opening at the lower extremity has not been attended with success in my hands.

In regard to *incising the sphincter*, I would say that, it should *not* be done in any case where it can be avoided. If the mucous membrane has not been penetrated and the integrity of the sphincter remains unimpaired my rule is to make no incision through the muscle. Good drainage can be established and maintained without taking any chances on having a case of fecal incontinence to harass the patient the remainder of his life.

Much more might be said upon the technique of the above mentioned and other operative procedures for the relief of fistula, but time and circumstances forbid.

#### DISCUSSION.

Dr. Stauffer: In the diagnosis the microscopic examination of the scrapings from every fistula is important, for we sometimes find tubercular infection where we least expect it. Sometimes we find here the first manifestation of tuberculosis. The method of treatment advocated is worth a trial in some cases for the experiment will do no harm.

Dr. Rollin H. Barnes: If there is any class of diseases that is neglected by the general practitioner it is rectal diseases. Dr. Stauffer has put none too much stress upon the failure in treatment by the general practitioner. I would not recommend ether as the general anesthetic because there is more straining and vomiting after ether than after chloroform. Sutures for internal hemorrhoids often prove unsuccessful for we have no means of pro-

tecting them from the secretions of the bowels. For that reason I favor the clamp and cautery in most cases. The number of cases that can be successfully treated by curetting is few for the tract is not usually straight. I heartily agree with the advice to let the sphincter muscle alone whenever possible. The cases where this is not possible are few. Dilatation of the sphincter and free drainage are the two points in the treatment of fistula. The trouble in most of these cases is an insufficient external opening for drainage. Another thing is the manner of placing the drain. It is very common to pack the gauze, which interferes with drainage. In most of these cases the tube drainage is probably better. Where you use the gauze put it in straight—don't double it up. There is a method I shall try in my next suitable case. Where the opening is large enough I don't see why we can not treat the internal opening with the Lembert suture as in any other part of the intestinal canal. With dilatation and proper drainage I think we could heal up these cases and save the sphincters.

Dr. V. P. Blair: A point that Dr. Stauffer dismissed with a few words might have received more attention, i. e., the clamp and cautery method. There are two entirely different methods. In one, the older, the whole mass is caught in the clamp and is burned off, causing much contraction. In the other operation you catch up the hemorrhoid and thrust the cautery deep into the hemorrhoid.

Dr. J. D. Potts: The clamp and cautery method is very imperfectly understood. The idea seems to prevail that this method embraces the taking up of the entire hemorrhoidal mass including all contiguous tissue. The correct method is to raise the mass, catch it with as little mucous membrane as possible, excise the larger portion and then cauterize the stump as thoroughly as possible. This is not applicable to those cases where the mass extends beyond the muco-cutaneous border. In this variety of hemorrhoid we have two types of epithelial cells, the squamous on the outside and columnar on the inside. When we make a scar that brings the columnar epithelium down where it does not belong, or the squamous epithelium up where it does not belong, we have a good field for malignancy. There is a form known as the thrombotic hemorrhoid from which the patient suffers more than from any other form. This results from constipation or pressure upon the vein which permits thrombosis to form. They become so strangulated and the patient suffers intensely. He applies for treatment and is given belladonna or something of that sort and a fistula fissure, or ulcer is the end result. The flexible spiral curette will practically bend upon itself and still permit the water to flow through. In nine cases out of ten the fistula is large enough to admit a fair sized probe or curette and if not an opening is easily made by a crucial incision.

Dr. Stauffer, in closing: I did not mean to endorse palliative treatment where operative treatment was possible, but it is better than to have the patient go to one who does not know how to treat him. No intelligent man will treat a rectal disease any more than he would a disease of the throat, without making an examination. Ether has been considered the safer of the two anesthetics, the nausea being a secondary consideration. Dilating the sphincter causes the patient to take a deep breath and he gets more of the anesthetic than you expect; for this reason there are more deaths from the anesthetic in operations on the rectum than in any other operation. I would not think of using catgut in doing the Lanmgham operation. I use the large catgut in operating on the so-called mixed hemorrhoids. The point is to sacrifice as little integument as possible. Divide right at the muco-cutaneous line and then place your sutures by the Amyx, Earle, or any other approved



method and you will get perfect co-aptation. Scar tissue favors the malignant process at the pyloric end of the stomach, and it is equally true of the rectal region. I give neither purgatives nor opiates. If the intestinal canal is empty the patient can wait three or four days without food of any kind except liquid diet. If there is pain I give morphine hypodermically. If a purgative is necessary olive oil may be given.

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## ARTERIOSCLEROSIS.\*

BY TINSLEY BROWN, M. D., HAMILTON, MO.

Arteriosclerosis is a degenerative process of the coats of the blood vessels, and the reference here pertains to the arteries.

This disease has been known for a long time and has been described by the old writers. It was referred to by Senac and Morgagni as an inflammatory process and was named Endo-arteritis Deformens.

This theory was accepted as the true cause by several pathologists, but by others it was considered as caused from some infectious disease.

On the other hand many writers considered that the sclerotic change came from some mechanical factor as high blood pressure following persistent contraction of the arterioles.

The other theory now coming in general acceptance is that the lessening of the resistance of the media of the vessels becoming weakened with lessening of the blood stream to compensate, there becomes a development of the subendothelial layer of the intima which restores normal relation between the arteries and their contents. Hence, the morbid anatomy is degeneration of the media with secondary compensatory thickening of the intima.

Arteriosclerosis may be local or it may be diffused. The former is the nodular, which has been described by Councilman. The patches are scattered along the inner surface. In the diffused form, the arterial wall is stiff and more or less dilated.

In old persons, the arteries are stiff, more or less tortuous and dilated. Closer examination reveals that the thickening of the intima is due to the connective tissue developing between the endothelium and underlying elastic tissue; afterward a degenerative change may take place in the newly formed connective tissue which consists of a hyaline transformation of the outer portion of the areas near the endothelium.

The areas of necrosis constitute the so called atheromatous abscess. When these areas break into the lumen of the vessel, a depression or ulcer is left; these ulcers very often become a seat of thrombus or fill with a calcareous mass by the deposit of lime salts.

In the middle coat changes of a degenerative nature take place which leads to a weakening and dilatation of the artery and consequent thickening of the intima. The middle tunic becomes thinner in consequence of atrophy and degeneration of muscular fiber and more or less

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\*Read at the annual meeting, May, 1906.

destruction of the elastic element; it may disappear entirely and be replaced by connective tissue.

The change of arteriosclerosis is not uniform. The lumen of the small vessels may become narrow and blocked by thrombus while the large vessels as, for instance, the aorta, are apt to become dilated. As has been said before, the various parts of the arterial system are not equally involved in the sclerotic process. The arteries of the extremities are apt to become first affected.

Statistics show that the ulnar artery is affected in 94 per cent., the anterior tibial in 93 per cent., sub-clavian in 88 per cent., cerebral in 87 per cent. and so on.

The reason why some are more liable than others to be affected is hard to explain, but it should be remembered that those of more tortuous course are more apt to become diseased.

Association with sclerotic changes in the vascular system, alteration of a similar nature in other organs may take place, viz., the heart, kidney and liver. In the senile form, the heart may become uncommonly small while in that of the young it may reach enormous proportions.

The myocardium is apt to show fibrous degeneration, the coronary arteries are apt to become affected or even occluded, the aortic valves sclerotic, opaque and incompetent.

The kidneys show in many cases microscopic changes. The etiology is somewhat obscure.

In former years, this change was supposed to be one of senility, but this is not the case, for many who die in advanced age show no such change. Of course it is found more often in advanced age, still those who are younger may be equally affected.

Those who do work that causes much exertion and great muscular strain are apt to become affected. Any thing which raises the arterial attention for a long time will bring about changes of this character.

The day laborers, blacksmiths, miners and woodmen are apt to develop arteriosclerosis at an early age. The vessels of the extremities are prone to be affected. The abuse of alcohol and syphilis are potent factors in the origin of the disease, the latter probably is the most important. Chronic lead poisoning and gout are recognized as potent causes; how they act in order to bring about this result is not clear, but probably through the raising of the blood pressure to overcome the peripheral resistance in the arterioles. The excessive use of tobacco is believed by some writers to cause arteriosclerosis and particularly in the coronary arteries.

Neurasthenics according to Romberg, are prone to arterial degeneration, in his opinion, from the alteration in the blood pressure by their unstable condition. Those who are subject to migrains show a tortuous condition of the temporal artery on the side mostly affected.

Dyspeptics and those subject to disorders of digestion are apt to

be affected. I have noticed in making examinations of veterans of the civil war that they, especially those who have been affected with the scurvy and chronic diarrhea, were very apt to have this disease of the arteries. After ten days' experience as U. S. Pension Examiner, I am certain that at least 50 per cent. of those I examined were affected with arteriosclerosis. On the other hand, those who are high livers and lead a sedentary life are apt to have arteriosclerosis of the mesenteric artery and those who perform arduous mental work to have the cerebral arteries affected and are prone to die of apoplexy.

The cerebral arteries are poorly supported and have no investment or muscular support and are easily ruptured. It appears to me that I find more arteriosclerotic patients than I did in the early days of my practice, or it may be that I recognize them more readily.

The circulation of the deleterious substances in the blood undoubtedly causes high arterial blood tension. Some drugs we know do this. I see lately where the experiment of giving adrenal extract to guinea pigs in time produces changes in the large blood vessels analogous to arteriosclerosis found in man thus affected. The symptoms are latent so long as they are unrecognized and not very widely spread. When they do become manifest, the symptoms depend on the part affected. If it is in the arteries of the extremities, the manifestation is shown in the form of numbness and stiffness. If of the renal arteries, it is manifested by an inadequacy of the renal secretion.

The arteriosclerosis of renal arteries may be secondary to the interstitial nephritis. Many of these cases have myocarditis and failing heart power, and the interstitial nephritis so intimately blend with the heart trouble as to make it difficult to tell which organ is the more seriously involved. In all the cases the cardiac incompetence is apt to prove the more serious complication. The arteries of the smaller size become narrow and clogged and the heart becomes weak from overwork. When there is sclerosis of the arteries of the medulla, the bradycardia found in many cases is undoubtedly caused from this. I had a case under my care not long since in which the pulsations of the heart were most of the time from 36 to 42 per minute, which answered in symptoms to the disease known as Stokes-Adams disease. After being nearly eighteen months thus affected, she died suddenly, as I suppose, from intercranial hemorrhage.

When the coronary arteries are affected it is not always easy to be certain of the diagnosis. This is the lesion probably in all cases of fatal angina pectoris.

The symptoms are so numerous as to preclude the possibility of giving them all in this paper. The prognosis depends entirely upon the extent of the vascular disturbance. The disease is undoubtedly incurable but much can be done to check the progress.

The treatment should be prophylactic, curative and symptomatic. The regulation of the diet, habits and hygienic surroundings may be



classed as of first importance in the prophylactic remedies. The curative remedies are few, probably potassium iodide or sodium iodide are the most potent. The symptomatic remedies are the vasso-dilators such as nitroglycerine and soda nitrate. These are probably the most important of the symptomatic remedies.

Calomel purge is used by many in conjunction with jalap. I find much benefit by giving small and oft repeated doses.

It is impossible in this short paper to say very much that could be said on this most important disease that probably is the indirect cause of the death of more human beings than any other known disease.

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### INFANT MORTALITY AND INFANT FEEDING.\*

BY H. M. MIXER, M. D., NEOSHO, MO.

Infancy ought to be the most healthful period in the whole course of human existence. The infant surrounded by everything an indulgent father's means, and a loving mother's care can devise and secure for its comfort, and well being, and safety—guarded by a mother-love which takes no account of fatigue, knows no relaxation nor intermission, and which would protect her offspring at the sacrifice of her own life,—fresh from the hand of Deity and corrupted by no vicious habits,—the infant so loved, so shielded, so protected, so uncontaminated, should be practically exempt from pain, and sickness, and death.

And yet, and yet, infant mortality is the scandal of civilization. Statistics show that about 50 per cent. of all children born into the world die under two years of age.

There must be a cause, a removable, a preventable cause, as I verily believe for this amazing mortality; and as sponsors for, and guardians of, the public health, it is the duty of physicians to seek out the cause and suggest, if possible apply, the remedy.

The bearing of children is the performance of a purely animal function, neither more or less.

Surround matrimony with all the safeguards you may; call it a civil contract and give it the protection of law; call it a sacrament and solemnize it with the rites of our holy religion; believe in it as the most binding of civil obligations, and the most sacred of religious duties; regard it as the unit of the race God-ordained in the garden of Eden, and coming down to us with all its prerogatives undimmed through the centuries, and it still remains true that its primal object is the perpetuation of the race, and that the function of re-production is common to us and to the lower orders of animal life, with substantially the same laws and limitations.

Asked when the education of a child should commence Emerson said "four hundred years before its birth." The preparation of a fath-

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\*Read before Newton County Medical Society, May 9, 1906.

er and mother to beget a child should begin at the same time. We pay too little attention to heredity. We give too little thought to physical proportions, physical perfection. We think too much about the cultivation of the head, and too little about the development of the body. A mother would almost be regarded as immodest, unchaste, who should talk about the physical proportions, the manly beauty, the perfection of form of the man to whom her daughter was to be married. We give time, and thought, and study, and pay money for blood, and breeding and pedigree, and perfection of form and style in the rearing of our animals, and breed our daughters to scrubs. Possibly it may not be unfortunate that all the progeny does not live to grow up. Infant mortality will be vastly reduced when we get better progenitors, better men and better women.

The proper limits of an article for an occasion of this kind precludes the possibility of entering upon a discussion of the infinite variety of causes which conspire to unfit a large per cent. of the men and women of to-day for the performance of the holy function of fatherhood and motherhood. It must suffice to seek to discover what can be done with the material which comes to our hand. I make no doubt the list should be largely increased of those to whom the mandate of the law forbids matrimony.

And now as to the birth of the baby.

It is not possible always to control the temperature of the room in which the baby is to be born; but when it is possible, the room should be warm, too warm for the comfort of the adults who occupy it. The sudden transition from a temperature of 98.5 degrees—mother's temperature—to the ordinary temperature of our living rooms—say 68 to 70 degrees—is a serious strain upon the vitality of the newly born infant, and should be avoided whenever practicable. The shock of this change of 28 or 30 degrees of temperature doubtless sounds the death knell of many of the newly born.

Having been born, the baby must be washed; and as it happens to all of us to meet people whose appearance, and odor as well, indicate that they have not had a bath since the mid-wife gave them one, it is probably proper to add that it should be quite thoroughly, though, of course, very gently and carefully done.

The time when it should be done is an open question and upon it competent authorities differ. The Germans have a fashion of smearing the infant with some bland unguent, wrapping it in a flannel blanket and laying it away in a warm room for several hours before washing it. Personally I think the practice a good one. It gives the child time to become accustomed to breathing, to the using of its own lungs to secure aeration of the blood. It furnishes the child's heart time to get in the way of carrying on its own independent circulation without aid from the mother. It gives time for all the vital functions to come into activity, and so makes the child stronger and better able to endure

the shock of the exposure and handling of its unaccustomed bath.

But whenever, and wherever, and however it is done, it should be done in a hot room, and, of course with warm water.

Having been rested, and washed and dressed, and kissed, though there need be no haste about it, the question of nourishment comes next in order.

Up to birth the foetus has been sustained, nourished entirely through its connection with the mother. Its stomach has played no part in the growth of the child. Nothing has ever been taken into its stomach.

It is axiomatic, goes without saying, that such a stomach should be treated gently, dealt with cautiously, guarded jealously. But lest mortals should be too dull to comprehend this truth the Deity has placed special emphasis upon it by putting into the breast of the mother, for several days, only a limited amount of milk specially prepared for this occasion. If God thundered the command from Sinai, or inscribed it on tables of stone, He could not say more plainly—Dont feed the baby. But in spite of this it is a fact that all over the world the ignorant old crones, who are always in evidence on such occasions and who call themselves sometimes nurses, and sometimes midwives, but who are always and every where nuisances, contrive to get into the stomach of the average newborn babe, within an hour of its birth, some form of dope, the abominations ranging up and down the scale all the way from Saffron tea to chamber lye. In this scandalous practice is often securely laid the foundation for puny infants, premature death or life-long suffering from dyspepsia within the first hour of the child's independent existence.

Three or four days after the birth of her baby the secretion of milk is fully established with the mother, and the amount normally secreted at this time is from three to four times what the child needs, or can possibly dispose of except in the way Nature has so wisely provided, alike for the safety of the mother and her offspring.

Just what degree of intelligence the new born baby possesses, just how much and what baby really knows, we have no means of measuring; but this much is certain, they all know how to suck, and have a voracious appetite, an appetite having no relation whatever to their needs for food, but given them solely and purely for the protection of the mother.

The lacteal secretion established, the mother's breasts fill with milk which would cause distress and breed disease if not removed, and so baby with its inordinate appetite, nurses an amount for which it has no need, and which would surely make it sick if retained in its stomach, but which it promptly rejects on being removed from the breast: nurses to protect the mother, vomits to protect itself.

This system of checks and balances, this adaptation of means to ends, is one of the wisest and most beautiful provisions of nature and



goes on unceasingly, though in a constantly diminishing ratio for the first five to seven months of infant life.

This is nature's way and takes place with all healthy infants, undisturbed by ignorant and officious meddling, almost with the regularity and certainty of the succession of day and night.

But it is meddled with. The stuffing, and gorging and poisoning which often I am tempted to say ordinarily, goes on before the secretion of milk is established, have so deranged the child's stomach, that while the voracious appetite remains, the power to reject the food it cannot use is lost. The milk is retained, the stomach has no power to digest it, and so it sours, putrifies and stinks, and generates poisonous gases, and goes along down the alimentary canal causing infinite agony to the child, and laying the foundation for an early death, or a life long struggle with disordered digestion. And here as elsewhere nature is remorseless in exacting the penalty for wrong doing; and, sadly be it said, the penalty is exacted from the innocent child instead of the ignorant nurse. It is always difficult, often impossible to restore this infantile stomach function which accommodates the needs of the child to the safety of the mother, when once it is destroyed.

About at this stage the physician is called in. The family is in trouble, and so is the doctor.

In my own practice, I have given more anxious thought, suffered more annoyance, done more preaching, and met with more failures in dealing with this condition of affairs than in the management of any other human ailment which has been brought under my treatment.

This, the commencement of infant life, is the commencement of the series of errors, crimes, I had almost said, which enter into the catalogue of causes which account for infant mortality.

But it is the commencement only. If the child lives, which is only problematical, and at any rate while it lives, it still has to struggle through the quicksands which ignorance, credulity, and doting indulgence plant in its pathway.

The infant still has a voracious appetite and will swallow greedily any thing put into its mouth. The anxious mother, her fool friends, the officious old women of the vicinage, the ignorant nurse, all are certain that the child is hungry and needs feeding, and from their stores of accumulated wisdom tell the mother just what to do,—just what to feed the child. Differing in everything else, they agree in this, that the mother does not have milk enough for her baby.

I presume it is the experience of you gentlemen of this society to meet this declaration at every stage of your professional journey. Certainly it was mine, and a more pernicious falsehood was never dinned into the ears of credulous motherhood.

It will bear repeating that the bearing and suckling of children is the performance of an animal function, and we, whose practice is largely in rural communities, and who are therefore familiar with

farmers, and farm life, and with the care of farm animals, know that the mother's milk is the only perfect food ever found for young animal life, and that practically it is always secreted in abundance. I was born on a farm and inherit a love for farm life, and have owned land and kept cows ever since I began to earn money; and I never heard of a cow which, in health, would not raise a splendid calf if the calf were given the whole of her milk; and so when I hear of the necessity of weaning an infant at ten days to four or five months old because the mother does not have nurse enough for it, I do not believe a word of the story, but put it down in my catalogue of inventions for the extermination of babies.

The subject is interminable, and my pen hesitates to call a halt, but this article is already too long and must be brought to a close.

When a child's stomach has been deranged by improper feeding, and all feeding during the first days and months of child life is improper, I know of no medicine which has the slightest tendency to restore the ability to reject—vomit—the surplus food it cannot digest. By limiting the time it is applied to the breast to five or six minutes, and protecting the mother by using a breast pump and wasting the surplus, we may sometimes get the child to vomiting again the superfluous milk, but not always. Besides it involves lots of trouble, it is always difficult to convince the mother and nurse of its necessity, and when applied ever so intelligently and industriously, it often fails, and the child goes on to its doom.

But there comes a time in child life when the breast milk is insufficient and when the baby must be fed.

When it is practicable a baby should always be nursed through its second summer; but of course, after it is seven or eight months old the insufficiency of the nurse must be supplemented by some sort of food.

The markets are full of prepared infant foods, and some of them have decided merit; but all of them are costly.

Where it can be obtained in its purity and freshness, cows milk will ordinarily be well tolerated, and is certainly the cheapest obtainable food.

As compared with breast milk it is richer in cheese, and deficient in sugar. Diluted and sweetened so as to make it approximate as nearly as possible to the milk supplied by the mother, it ordinarily fills the bill.

But whatever food is used, it should be commenced with infinite caution, a specific, a carefully measured amount should be given the child, and the stools examined to know if it is being digested. If undigested, curdled, sour milk is found in the stools, the amount given was too large, and must be reduced.

Food taken into the stomach digests or decays. If it digests, it nourishes, if it decays it poisons. Undigested, sour, putrid milk cannot for any length of time be permitted to pass along a child's bowels without generating disease.

In this connection it will bear repeating that a child's appetite is no guide whatever as to the amount it should be fed. Unlike breast milk, which a healthy child's stomach will reject if in excess of its wants, cows milk is never vomited, and should therefore, never be given in excess of the Child's actual needs.

Finally, and in conclusion, conscious that I have only meandered along the borders of this all important subject, I want to say that it is my unalterable belief that in improper feeding lies the appalling infant mortality which confronts us.

The ignorant nurse dopes the new-born babe. The officious old women induce the mother to feed the baby. The doting father gives the baby a little gravy and mashed potato, not because the child is hungry, but because it gratifies himself to see baby eat. Albeit potato is never digested and is rank poison in the infant's stomach. The older children, not to be outdone, divide their stores with the baby; and so the dreary catalogue goes on and on.

Years ago I was called to see a child of eighteen months suffering with violent convulsions. As soon as the baby could swallow I gave it a large dose of castor oil; and when the bowels moved, found in the stools a quantity of tea leaves, some dried peaches, a wad of chewing gum, and half a handful of bones of chickens feet which the mother had boiled and permitted the child to gnaw.

I was engaged in the active practice of my profession for fifty years, and during that time I am certain I did not have in my practice fifty infant deaths, from all causes combined, save only injudicious feeding.

I conclude as I commenced.—Infant mortality is the scandal of the age, and the opprobrium of our profession. I know that on this subject of infant feeding I am an extremist,—a crank if you please; but my experience and observation have made me what I am; and in the production of this article I have held myself rigidly in check lest I should violate the proprieties in the expression of my horror at the ignorant and remorseless destruction of infantile life.

Our cemeteries are everywhere thickly strewn with the graves of infants untimely taken off, and instead of the pitiful and pathetic inscriptions which tell of mysterious dispensations of Providence, desolate households, and parental agony, there should be chiseled on the marble slab which marks their final resting place—*Slaughtered with a Tea Spoon.*

Neosho, Missouri.



## A METHOD OF OPERATING IN INGUINAL AND FEMORAL HERNIA WHEN COMPLICATED BY ABSCESES.\*

BY HERMAN E. PEARSE, KANSAS CITY, MO.

Abscess complicating hernia whether inguinal, femoral, ventral or umbilical, may arise from several causes and accompany several conditions; but is usually due to prolonged efforts at reduction and long delay.

If the hernial sac is opened in the usual manner the pus is encountered before the peritoneum is entered. The first step in the inflammation seals the opening into the general cavity and the exuded serum in the hernial sac is quickly converted into pus. Could the incision be made into this and through it into the general peritoneal cavity a peritonitis is almost sure to follow the opening of the ring and the procedure for the release of the gut or omentum, for it is only in case of strangulation or incarceration that I have observed this complication of *abscess*. To avoid this I have upon three occasions made use of the following procedure:

The abdomen is cleaned as in laparotomy and the surgeon and his assistants are prepared as for abdominal operations not complicated with pus. The abdomen is opened directly above the hernia, if inguinal or femoral; beside of it if ventral or post-operative, and either below or above if umbilical. With the walls of the abdomen well retracted it is possible to see the condition of the structures entering the ring and this from the abdominal side. If it is omentum that is involved the mass can be ligated at the entrance to the ring. In any case, sponges and gauze pads are carefully packed about the ring thus shutting off the abdomen securely from infection.

The operator now turns his attention to the abscess.

The hernial sac is now opened by a small incision only large enough to allow inspection and drainage. The pus is removed and the cavity flushed with one-half of 1 per cent. formalin solution. The edges of the abdominal incision are now protected by sponges. The ring is now opened and the inflamed bowel drawn into the abdominal cavity upon the sponges fixed to received it. If it be omentum it is not withdrawn but ligated and cut off and the end removed through the hernial incision. The ring is now firmly closed from within the abdomen and covered by a second layer of peritoneal sutures. The abdominal wound is closed whenever the structures concerned in the hernia are properly treated, cleaned and prepared for recovery within the abdomen, and the protective sponges removed. The external wound and hernial cavity is best packed with gauze and forced to heal by granulation.

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\*Read at the annual meeting, May, 1906.

The advantages of this procedure are:

1. The abdomen is opened in a perfectly clean aseptic manner and properly prepared for the reception of infected structures.
2. The clean bowel is not brought into the infected cavity.
3. The infected bowel is cleaned to a point where the peritoneum can take care of it before it is brought into the peritoneal cavity.
4. Tedious healing is certain in these cases; this procedure reduces it to the shortest possible time.
5. There is no mortality, while the mortality is high by the ordinary method when pus occupies the hernial sac.

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## WHEN IS OPERATIVE INTERFERENCE CONTRAINDICATED.\*

BY F. H. BRUNIG, M. D., PH. G., KANSAS CITY, MO.

PART OF A SYMPOSIUM ON APPENDICITIS.

The surgery of the appendix has forged ahead so rapidly, ly, that it is far in advance of that of other abdominal organs. The questions remaining unsettled pertain less to the surgical technic or methods, than to the disease conditions present, that may or may not make immediate operation necessary. Is the patient's interest best subserved by operating at once when the diagnosis is made or by waiting to some future time? In America this problem has yet to be solved. In Europe much has been done toward the classification of appendicitis and operative or non-operative treatment is employed according to such classification.

Treves gives statistics covering also his own experience, and places the general mortality of appendicitis at 5 per centum; the mortality following operations in the interval, or quiescent stage at less than 1 per centum and that during the acute stage at 20 per centum. These statistics include in the acute stage operations, those done in the first twenty-four hours, or before adhesions have formed and which should probably be classified with the interval operations because of their equally low mortality rate. If we would consider them as in one class, those operations done after the first twenty-four hours and during the remainder of the acute stage, we would be confronted by a much higher death rate. The reason for this is clear when we remember the pathological and physiological processes going on in the abdominal cavity at this time.

Upon the one hand is the infection encroaching farther and farther on the peritoneal surface, with a correspondingly rapid extension of the peritonitis. Upon the other hand is nature's protective process: lymph is thrown out, which coagulates and binds adjacent surfaces together, thus limiting the disease process to a circumscribed

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\*Read before the Jackson County Medical Society.

area and preventing further infection of the peritoneal cavity. Operations at this time would necessarily tend to separate adhered surfaces and remove the exudate necessary to form adhesions, making possible a further infection of the peritoneum. Many authorities, mindful of this danger do not operate at this stage of the disease, unless an emergency arises, but instead, employ measures calculated to promote the protective process under way, the patient's condition being carefully watched.

Ochsner has systemized the management of this stage of appendicitis and has brought forward a method of treatment entirely original with him. The patient's position in bed is made favorable for the gravitating of fluids towards the pelvis. He holds as most important the inhibiting of paristalsis, which is accomplished by allowing no food to enter the stomach. Food is given every 4 hours in the form of nutrient enemata consisting of three ounces normal salt solution, and 1 oz. predigested food. Water in very small quantities is allowed at times, but if vomiting or pain is present the patient quenches his thirst by rinsing his mouth with cold water, and small enemata are given. Vomiting and gaseous distension are treated by giving small enemata and by stomach lavage. Pain requires no special treatment; caused by paristalsis, it subsides when the latter is controlled. The treatment is continued until the pulse and temperature are normal. If an abscess forms it is drained.

The author states he has not seen a death where this treatment was begun early, and that the mortality for this stage of the disease is reduced to 4 per cent. We should not, however, be guided in any case by fixed rules or methods of treatment. No matter what therapeutic measures are employed we must be constantly on our guard and ready to deal with changed conditions, which if not observed in time would prove disastrous. In such cases the quantity or virulence of the infectious material is so great that the protective processes are too slow or insufficient to check its rapid progress into the peritoneal cavity. The much dreaded "gangrenous appendix" and "perforated appendix" would be quite harmless if strong adhesions were present to protect the peritoneal cavity. It is not unusual to find the appendix gangrenous and perforated in the cavity of an appendicular abscess. These terms simply mean that the infection reaches the peritoneal cavity rapidly for reasons already stated. For the same reasons this grave condition is met with in the first three or four days of the disease. Later, an extensive septic peritonitis could be caused by the spontaneous rupture of an abscess, but it is hoped that we have passed that epoch in the history of appendicitis which could make such an accident possible.

A case in the first few days of an acute attack, receiving expectant treatment, may have shown no alarming signs or symptoms, when suddenly the pulse becomes rapid; the abdomen is distended,



tense and painful. The face has changed its expression and we have a clinical picture of diffuse, or fulminating peritonitis. In other cases the progress of the infection to a dangerous state may be so gradual and insidious that the highest diagnostic skill is required to understand the patient's true condition. The pulse rate is often the only index as to the course the disease is taking. The infection may find its way through the appendix posteriorly and form a retro-peritoneal abscess. Probably no marked signs of peritonitis would be present, but instead we would have early symptoms of sepsis—chills, sweats, and a rapid pulse.

If the case comes under observation in the first twenty-four to thirty-six hours of the acute attack, operation should be advised. Later, after the time for the early operation has passed, and during the remainder of the acute stage, treatment favoring the formation of adhesions and rest to the inflamed tissues, should be employed. Operation should be postponed, if the patient's condition admits, until the acute attack has terminated in a chronic, or recurrent appendicitis, or in the formation of an abscess. Each of these resultant conditions requires operation. The abscess should be dealt with at once, and the other operation done after the patient has regained sufficient vitality.

There is a small class of cases where an abscess has formed, in which it would seem justifiable to postpone operation for a short time. The cases in mind are those suffering from some intercurrent disease—tuberculosis or other debilitating malady and reduced by an acute attack of appendicitis to such a state of extreme weakness, that an anesthetic would seem dangerous. If such patients have regained their appetite and are gaining strength, and if the abscess is not increasing in size or producing much tension, the danger of waiting a few days would probably be less than to resort to operation at once.

The results obtained from the treatment of appendicitis in general, depend much upon the ability of the attendant to interpret correctly the different signs and symptoms present. No one is competent to decide when to operate and when not to operate who has not studied carefully a number of cases from beginning to end. The general practitioner, as well as the surgeon, should possess a clear knowledge of this disease, for upon him falls the responsibility of deciding this important question in a majority of cases.

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## THE COUNTRY DOCTOR AND APPENDICITIS.\*

BY M. P. SHY, M. D., KNOB NOSTER, MO.

A sufficient apology for the introduction of so time-worn a subject, is found in the startling prevalence of the condition, and the unnecessarily high mortality rate. So long as the daily press continues to record frequent deaths from a disease which at some period of its

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\*Read at the annual meeting, Jefferson City, May, 1906.

course is recognized by the medical profession to be distinctly curable, so long will there remain a justification for its most thoughtful and oft-repeated consideration.

Nearly all of the literature on this subject is written by physicians and surgeons that live in the city who have the advantage of hospitals and trained nurses and trained help. But we poor country physicians, and I will not say surgeons, for a man who does as little surgery as we country doctors do could hardly be called a surgeon, have no such advantages. But poorly equipped as we are, we are often called upon to treat and even operate on these cases without a hospital, without a trained nurse and even without trained help. I say without trained help because each time we have different help to the case preceding and no man can operate as well with different anesthetists, different assistants and different would-be nurses as he who has the same help each time, or at least help that is accustomed to assisting in such work. I have operated on quite a number of these cases in the country and never have I had the same help twice. I simply speak of these things to show you the disadvantages of practicing in the country compared to the city. You may ask the question why we do not send our cases to the city to a hospital with all of its advantages? The answer is because circumstances forbid. The family is too poor, or it is a pus case demanding immediate attention, one that would be dangerous to move for the moving and jarring would in all probability cause a rupture of the adhesions and the wall that nature had so wisely thrown around this mischievous little organ, a general septic peritonitis following, and then we can guess what is apt to follow next. It is the pus cases that I have especial reference to in this article, for the recurring form can be sent to the hospital.

We all agree. (1) That appendicitis is a surgical disease. (2) That the surgeon should be called as soon as the diagnosis is made and that the future treatment should be left to him, (when it is possible to have a surgeon).

There are some points in appendicitis that surgeons are well agreed upon. (a) The early operation; the preponderance of evidence is in favor of operating within the first twenty-four or thirty-six hours of the on-set of a pronounced primary attack. It is generally conceded that during this period of time the pathology is confined to the appendix. This is probably true in most instances, and yet numerous exceptions to his rule are recorded, perforation and infection to the peritoneum occurring within this period. So that a fixed rule, or the dictum of operating within the first twenty-four or thirty-six hours should be qualified. For should perforation and infection to the peritoneum have occurred, the question at once presents itself as to the advisability of immediate operation, or delayed methods, points of procedure in which surgeons are still at variance.

It is utterly impossible for any one to predict the course that any

case of appendicitis may pursue. Whether the appendix will perforate, become gangrenous, or will be walled in by adhesions, the most conservative treatment is unquestionably the early operation. However a large number of acute cases in the country are not seen by a surgeon at all unless they pass into a chronic or suppurative form. The treatment will depend on the conditions present. To recommend the attempted tiding of all the patients through the primary attack regardless of existent pathology, by any method or methods of treatment, would be disastrous. Fixed rules in the treatment of appendicitis are impracticable. There is no period from the onset of an attack of appendicitis to its termination where the surgeon should be governed by anything but the conditions existing in this individual case.

Septic peritonitis is the most important and frequent complication met with. It may vary in degree from a circumscribed area in the right iliac fossa to involving the whole peritoneum. The mortality by any of the methods that have as yet been adopted in cases of general septic peritonitis has been nearly one hundred per cent. There are those who practice the radical method of removing the appendix, washing out the abdominal cavity with normal salt solution or closing without drainage. While it is still the practice to do the radical operation and institute drainage, at the present time from a limited experience with the method I am in favor of the so-called starvation treatment of Ochsner. I believe that in cases of appendicitis seen too late for the early operation, where there is evidently a developing peritonitis, as well as cases where there is a pronounced general peritonitis, such a plan of treatment offers more than operative measures. Operative interference in dealing with a progressive peritonitis often disseminates the infection by breaking down nature's wall of plastic lymph, besides the addition of shock to a system already greatly burdened which must necessarily lessen resistance.

From a reasonable experience and from what I have observed in the practice of others I shall formulate the following conclusions:

(1) The early operation should be advised in every pronounced attack of appendicitis.

(2) In cases seen too late for early operation the symptoms should be carefully watched; the blood count should be made if possible; after an analysis of the symptoms and conditions present the surgeon must decide as to the advisability of operation, or the adoption of medical means; repeated examination should be made frequently, to ascertain if there is evidence from the symptoms present of increasing pathology.

(3) In cases where there is a progressive peritonitis the Ochsner method of treatment, until the acute symptoms have subsided, I believe to be the most promising, (a) In cases where general septic peritonitis exists, the operative treatment is a failure. I believe the Ochsner method of treatment will lessen a little our mortality rate, which is nearly one hundred per cent. from operation.



## THE ETIOLOGY AND CURE OF HYSTERIA.\*

BY F. WALTER, M. D., PERRY, MO.

During the past ten years, I have treated the more rebellious cases of hysteria, such as occur in a general practice, with uniform success by the following method.

From the dejections of the hog a colony of the colon bacillus was isolated, and massive cultures grown from this, potatoes generally being used for the purpose. When the growth was well matured it was scraped off and mixed with a quantity of wheat flour sufficient to take up the moisture. This put into No. 1 caps, was administered every four hours, the cure being completed by the end of the third day.

The above was true for all those cases of hysteria for which no obvious cause could be assigned. This method of treatment is not applicable for the relief of hysterical manifestations purely secondary, neither may we expect benefit when given to patients who suffer the results of an acute attack after the latter has passed. I refer especially to paralyses. Given to all others it has never disappointed.

These observations open the door, and give us a view of the pathology of this obscure affliction. Colon bacilli exist in the intestinal tract of every case of hysteria. Inasmuch as a cure results by the 4th day after feeding the patient apparently the same microorganism, we can but conclude that the primary type had become toxic, being in the process of cure displaced or crowded out by a harmless variety.

It yet remains by cultural methods to establish the deviation in type undergone by the colon bacillus, when it becomes pathogenic for hysteria. It will no doubt in the future be possible the same as has been the case in differentiating the typhoid bacillus from the colon bacillus which it so closely resembles. Aside from questions of this nature the subject is replete with interest for the neurologist and family physician, from the standpoint of the certain results which may confidently be expected in this bothersome class of patients.

I have briefly brought this subject before the society trusting it will receive that degree of investigation which it obviously merits.

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\*Read at the annual meeting, May, 1906.

# Journal Missouri State Medical Association

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Published Monthly under the supervision of the Publishing Committee.

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Volume III.

JANUARY, 1907.

Number 7

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E. J. GOODWIN, M. D., EDITOR.

PUBLICATION COMMITTEE:

C. M. NICHOLSON,

WALTER B. DORSETT.

B. M. HYPES.

W. G. MOORE.

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## EDITORIAL.

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### NEW LEGISLATION.

At the meeting of the State Board of Health in St. Louis on December 10th the recommendations of the Missouri State Medical Association relative to bills to be introduced in the Legislature were considered in detail.

Some changes were made in the medical Practice Act. Among these was the incorporation in the bill of the standard minimum requirements for education for entrance upon the study of medicine as adopted by the State Medical Association. The proposed draft of amendment to the law touching criminal abortion was approved, and its adoption recommended. This provides for the punishment of any person adjudged guilty of criminal abortion whereby the death of the woman or any quick child ensue, of manslaughter in the second degree, and in case no death ensue following such attempt of criminal abortion the person shall be adjudged guilty of the felony of abortion, and upon conviction shall be punished by imprisonment in the penitentiary. The full text of the proposed amendment was published in the December number of the JOURNAL.

An important feature of the bill was the adoption of the recommendations of the Bureau of the Census of the United States Government, in so far as they are applicable to this State, relative to the collection and preservation of vital and mortuary statistics.

The Board approved the Pure Food Bill to be introduced by the United Pure Food Commission.

Dr. Guthrie McConnell, Bacteriologist for the Board, presented a proposition for the establishment of stations throughout the state for the distribution of diphtheria antitoxin free to indigent persons in a manner similar to that in vogue in the State of Pennsylvania. He

stated that the Loederle Laboratories of New York were willing to establish 120 stations, furnish a certain number of antitoxin tubes, supply blanks for record of cases, for a primary outlay of \$1,250.00.

The plan was discussed by the members of the Board and favorably received, but no definite conclusion was reached or recommendation adopted.

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### THE PROGRAM.

A number of county societies have appointed members to read papers at the next annual meeting. The program committee is anxious to receive the titles of these papers as soon as possible in order to publish them in the preliminary program. We hope, therefore, that the essayists will communicate with the committee and announce the titles of their papers.

We want to urge that all societies take action at their next meetings and appoint a member or members to represent them on the program of the annual meeting. The preliminary program will be published in the February issue of the JOURNAL and this program should announce as many papers as possible with titles and authors.

If a sufficient number of papers are promised the meeting will be divided into three sections, a medical section, a surgical section and a section on diseases of the eye, ear, nose and throat.

The committee is anxious to present a program exceeding in interest and diversity of subjects that of any preceding meeting. Our membership has increased almost 25 per cent. in the last eight months. The county societies are doing splendid work in their meetings. A very general spirit of enthusiasm in the aims and objects of our organization prevails. Present indications point to a program for 1907 of greater scientific interest, more general application and of higher practical value than that of any previous meeting.

Here again we realize that co-operation is the key-note of success. The committee is powerless if it does not have the assistance, support and cooperation of the county societies. Therefore we again urge that every county society not now represented on the program take action at its next meeting and appoint a member to read a paper at the annual meeting, sending the title of the paper and name of the author to the committee as soon as possible.

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### ANOTHER STEP.

The crusade against objectionable advertisements in newspapers has been strengthened by a decision in the Court of Criminal Correction, St. Louis.

The cause was instituted through Mr. I. V. Barth, counsel for the St. Louis Medical Society. The case was conducted as a special pro-



secution brought against the St. Louis World Publishing Company, as a test case for all the newspapers to determine the legality of the city ordinance forbidding advertisements in their nature obscene.

The defense raised the question as to the constitutionality of the ordinance and the power of the city of St. Louis under its charter to enact such regulation.

It was decided by the Court, Judge Hiram Moore presiding, that the ordinance was constitutional and that the city had the power to enact same, fining the defendant \$50.00, which was the amount imposed by Judge Tracy in the police court.

Counsel for the defense at once took steps for appeal to the Supreme Court, where the case now rests.

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### CHRISTIAN COUNTY ORGANIZED.

Through the efforts of Dr. T. A. Coffelt, Councilor of the twenty-fifth district, Christian County Medical Society has been organized and affiliated with the State Association. The first meeting was held at Ozark on December 28th with ten charter members. The following officers were elected: President, J. C. Young, Ozark; vice-president, Fred H. Brown, Billings; secretary, J. A. Roberson, Ozark; treasurer, J. W. Bruton, Ozark.

We welcome Christian County Medical Society to our membership and we congratulate the physicians in that section in having accomplished this organization. The benefits of membership in a local representative County Society will soon be apparent to every member; affiliation with the State organization will add strength and power to that body and at the same time enlarge the field of influence of every member from Christian County. We shall look for interesting reports from Christian County Medical Society and trust that every member will take an active, earnest part in all the meetings.

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### LIFE INSURANCE EXAMINATIONS—\$5.00.

We, the undersigned practicing physicians of Harrisonville, Mo., hereby enter into and bind ourselves to the following agreement, to wit: That after January 1, 1907, we will not examine applicants for "old line insurance companies" for less than \$5.00 for each examination.

J. S. TRIPLETT, M. D.

M. P. OVERHOLSER, M. D.

A. R. ELDER, M. D.

H. S. CRAWFORD, M. D.

DAN'L W. CONGER, M. D.

H. G. MAY, M. D.

Following is a list of the new members admitted from August 1st to December 31st.

#### ADAIR COUNTY.

Barnes, F. M.....Brasher  
Duffie, W. M.....Millard  
Hall, W. S.....Novinger  
Jurgens, L. C.....Kirksville  
McConnell, J. L.....Collinsville  
Martin, W. W.....Sperry  
Munn, W. E.....Pure Air, R. F. D.  
Noe, L. ....Collinsville  
Nunn, J. C.....Novinger  
Sparling, G. A.....Kirksville  
Williams, W. ....Kirksville

#### AUDRIAN COUNTY.

Rodes, N. R.....Mexico  
Toalson, G. F.....Mexico

#### BATES COUNTY.

Lane, G. G.....Sprague  
Powers, C. R.....Amoret  
Spark, E. E.....Amsterdam  
Williams, J. H.....Hume

#### BENTON COUNTY.

Carl, C. A.....Cross Timbers  
Dillon, Marion .....Fairfield

#### BOONE COUNTY.

Bilden, W. E.....Columbia  
Lewis, M. D.....Columbia  
Riggs, John Max.....Columbia  
Robertson, R. R.....Columbia  
Kampschmidt, A. W.....Columbia

#### BUCHANAN COUNTY.

Flynn, J. H.....Ilwaco, Wash.  
Long, Levi S.....St. Joseph  
Stamey, Thos. ....St. Joseph

#### CALLAWAY COUNTY.

Evans, E. E.....Fulton  
Ferguson, A. D.....Auxvasse  
Owens, H. I.....Fulton  
Williamson, W. H.....Wainright

#### CASS COUNTY.

Burney, R. H.....Freeman  
Conger, D. W.....Harrisonville  
Earnsworth, A. D.....Drexel  
Hammond, M. ....Raymore  
Palmer, W. C.....Dayton  
Rhoads, M. H.....Austin  
Smith, A. M.....Pleasant Hill  
Tout, B. B.....Archie

#### CHARITON COUNTY.

Banning, T. J.....Salisbury  
Brumhall, J. D.....Salisbury  
Dewey, W. T.....Keytesville  
Epperly, R. G.....Prairie Hill  
Ewen, Oliver. ....Shanondale  
Hardy, G. W.....Sumner

Hawkins, G. W.....Triplett  
Lawhorn, H. W.....Forest Green  
Todd, W. T.....Forest Green

#### CLARK COUNTY.

Callihan, R. G.....Luray  
Crumley, A. C.....Wyaconda  
Geeslin, P. A.....Luray  
Hinson, C. A.....Revere  
Haase, Freeman .....Revere  
Reese, H. S.....Wayland  
Rebo, T. A. S.....Alexandria  
Young, J. A.....Wyaconda

#### COOPER COUNTY.

Barnes, W. S.....Pilot Grove  
Barnes, H. T.....Pilot Grove  
Pendleton, T. O.....Pilot Grove

#### DAVISS COUNTY.

Henry, A. M.....Pattonburg  
Jarrett, S. S.....Pattonburg

#### DeKALB COUNTY.

Clark, W. J.....Maysville  
Evans, R. L. A.....Amity  
Lee, L. E.....Weatherby  
Perkins, O. L.....Union Star  
Quinn, J. C.....Clarksville  
Richey, L. A.....Fairport  
Stronp, E. R.....Weatherby  
Yeater, H. P.....Maysville

#### FRANKLIN COUNTY.

Mankopf, B. E.....New Haven  
Smith, A. A.....Pacific

#### GASCONADE—MARIES—OSAGE COUNTY.

Byler, Wm. F.....Koeltztown  
Jose, J. E.....Belle  
Neeley, J. E.....Vancleve

#### GENTRY COUNTY.

Conrad, J. W.....Albany  
Landis, H. B.....King City  
Martin, W. J.....Albany  
Patton, Hugh J.....McFall  
Patton, Chas. O.....McFall

#### HENRY COUNTY.

Bradshaw, J. T.....Montrose  
Bronaugh, J. H.....Calhoun  
Strieby, U. G.....Brownington  
Taylor, C. D.....Brownington  
Wilson, J. S.....Deepwater

#### HOWARD COUNTY.

Champion, J. R.....Hillsdale  
Drake, C. F.....Boonesboro  
Fleet, T. B.....New Franklin  
Givens, H. K.....Fayette

Hume, J. V. .... Armstrong  
 Hawkins, W. R. .... Glasgow  
 Jorden, J. E. .... New Franklin  
 Lewis, C. O. .... Fayette  
 Lee, C. H. .... Fayette  
 Moore, A. W. .... Fayette  
 McGee, C. P. .... Fayette  
 Smith, N. E. .... Fayette  
 Thompson, W. S. .... Armstrong  
 Watts, C. W. .... Fayette  
 Wright, U. S. .... Fayette  
 White, J. A. .... New Franklin  
 Burgwin, A. B. .... Fayette  
 Richards, C. F. .... Fayette  
 Halsey, F. J. .... Franklin

## JEFFERSON COUNTY.

Hauck, Saml. W. .... Kimmswick  
 Kirk, Wm. J. F. .... Kimmswick  
 Long, F. L. .... DeSoto  
 Tidwell, J. W. .... DeSoto

## JOHNSON COUNTY.

Martin, W. L. .... Chilhowee  
 Kaines, N. J. .... Knobnoster  
 Howard, T. S. .... Chilhowee

## KNOX COUNTY.

Humphrey, H. M. .... Locust Hill  
 Haden, J. W. .... Plevna  
 Humphrey, B. F. .... Burdland  
 Morris, W. J. .... Edina  
 McReynolds, U. R. .... Knox City  
 Pierce, Donn ..... Neward  
 Wilsey, A. R. .... Hurdland

## LAWRENCE-STONE COUNTY.

Clark, H. Ross ..... Pierce City  
 Doggett, C. R. .... Crain  
 Freeland, P. D. .... Pierce City  
 Gum, L. G. .... Stinson  
 Harding, D. E. .... Aurora  
 Loveland, W. S. .... Verona  
 Miller, Thos. D. .... Aurora  
 Rice, Marion ..... Scotts City  
 Schumate, L. St. Clair ..... Reeds Springs  
 Stevenson, F. S. .... Aurora

## LINCOLN COUNTY.

Bailey, S. M. .... Elsberry  
 Diggs, J. .... Hawk Point  
 Keeling, F. U. .... Elsberry  
 Knox, J. A. .... Whiteside  
 Powell, C. E. .... Elsberry  
 Prewitt, G. E. .... Hawk Point  
 Stuckert, Otto ..... Whiteside

## LINN COUNTY.

Perrin, J. H. .... Marceline  
 Knott, A. W. .... Marceline

## MARION COUNTY.

Paxton, C. E. .... Hannibal  
 Ferrell, Chas. O. .... Hannibal  
 Roselle, T. A. .... Palmyra

## MERCER COUNTY.

Ewing, E. W. .... Modena  
 Pickett, C. P. .... Mercer  
 Rowell, B. S. .... Mercer  
 Oyler, H. W. .... Millgrove  
 Stacy, E. W. .... Princeton

## MILLER COUNTY.

Bennage, J. L. .... Iberia

## MISSISSIPPI COUNTY.

Finley, F. L. .... Anniston  
 Vernon, F. S. .... Farmington  
 Willis, Albert ..... Birdspoint

## PETTIS COUNTY.

Bronson, I. T. .... Sedalia  
 Heaton, A. H. .... Sedalia  
 Handley, Walter E. .... Sedalia  
 Nasse, E. .... Sedalia  
 Walker, W. E. L. .... Lamonte

## PIKE COUNTY.

Biggs, M. O. .... Bowling Green  
 Byrns, R. W. .... Frankford  
 Barnett, D. E. .... New Hartford  
 Bankhead, J. E. .... Clarksville  
 Bartlett, J. M. .... Clarksville  
 Bartlett, E. M. .... Clarksville  
 Bankhead, C. L. .... Paynesville  
 Dreyfus, J. W. .... Louisiana  
 Davis, J. D. .... Louisiana  
 Hetherlin, T. G. .... Louisiana  
 Hereford, R. G. .... Louisiana  
 Hardin, Rufus ..... Louisiana  
 Kennedy, J. J. .... Frankford  
 Pollard, W. H. .... Eolia  
 Pearson, D. M. .... Louisiana  
 Smith, C. A. .... Annada  
 Treadway, W. W. .... Turpin  
 Unsell, J. B. .... Eolia  
 Walters, W. T. .... Bowling Green

## RANDOLPH COUNTY.

Ash, O. O. .... Moberly  
 Barnhart, D. A. .... Huntsville  
 Dutton, C. K. .... Moberly  
 Howerly, J. A. .... Clifton Hill  
 Mitchell, R. A. .... Clark  
 Selby, W. H. .... Moberly  
 Taylor, J. W. .... Huntsville  
 Terrell, W. R. .... Clifton Hill  
 Toules, S. P. .... Jacksonville

## SALINE COUNTY.

Lawless, C. L. .... Napton  
 Davidson, J. H. .... Little Rock

## ST. CHARLES COUNTY.

Edwards, J. C. .... O'Fallon  
 Kraft, Albert J. .... Augusta  
 Rickhoff, H. J. .... Augusta  
 Sandfos, F. .... Portage Des Sioux  
 Wiegiers, T. L. .... Flint Hill

## ST. FRANCOIS COUNTY.

Appleberg, Ruben ..... Leadwood



English, J. H. .... Farmington  
 Flemming, Chas. R. .... Farmington  
 Lister, R. B. .... Desloge  
 McEwen, G. A. .... Farmington  
 McCormick, E. C. .... Farmington  
 McKenzie, D. H. .... Leadwood  
 Reese, W. C. .... Elvins  
 Williams, G. B. .... Flat River

## ST. LOUIS, CITY.

Barker, S. J. .... St. Louis  
 Barnes, A. S. .... St. Louis  
 Baumgartner, C. .... St. Louis  
 Bewig, H. W. .... St. Louis  
 Bles, V. O. .... St. Louis  
 Beycr, A. S. .... St. Louis  
 Brandenberger, T. A. .... St. Louis  
 Broderick, J. K. .... St. Louis  
 Buchanan, J. M. .... St. Louis  
 Byrd, R. L. .... St. Louis  
 Calfass, W. F. .... St. Louis  
 Connolly, P. D. .... St. Louis  
 Cook, C. E. .... St. Louis  
 Cooney, D. C. .... St. Louis  
 Dorsett, E. Lee. .... St. Louis  
 Ehrhardt, R. T. .... St. Louis  
 Fienup, T. F. .... St. Louis  
 Fischer, J. A. .... St. Louis  
 Fries, W. A. .... St. Louis  
 Gettys, H. .... St. Louis  
 Golland, M. .... St. Louis  
 Gordon, F. N. .... St. Louis  
 Harman, M. F. .... St. Louis  
 Hartwig, O. A. .... St. Louis  
 Houwink, J. J. .... St. Louis  
 Huber, J. B. .... St. Louis  
 Johnson, W. L. .... St. Louis  
 Kimbrough, J. S. .... St. Louis  
 Koch, J. V. .... St. Louis  
 Koontz, C. J. .... St. Louis  
 Leavy, C. A. .... St. Louis  
 Luedde, W. H. .... St. Louis  
 Lyon, H. N. .... St. Louis  
 Marchildon, J. W. .... St. Louis  
 May, A. .... St. Louis  
 Max, C. O. .... St. Louis  
 Miller, R. C. M. .... St. Louis  
 Moeller, C. E. .... St. Louis  
 Mueller, G. L. .... St. Louis  
 Nash, W. H. .... St. Louis  
 Nicks, H. G. .... St. Louis  
 O'Bannon, R. W. .... St. Louis  
 Parks, G. M. .... St. Louis  
 Pfingsten, C. F. .... St. Louis  
 Potter, P. .... St. Louis  
 Rotter, C. F. .... St. Louis  
 Rusk, W. M. .... St. Louis  
 Rusk, E. .... St. Louis  
 Russler, J. J. .... St. Louis  
 Sante, A. H. .... St. Louis  
 Say, W. J. .... St. Louis  
 Schulz, E. .... St. Louis  
 Schulz, H. W. .... St. Louis  
 Senseney, E. M. .... St. Louis  
 Shapre, N. W. .... St. Louis  
 Sievung, G. W. .... St. Louis  
 Spain, K. C. .... St. Louis

Spencer, S. .... St. Louis  
 Sutter, J. S. .... St. Louis  
 Thumscr. L. .... St. Louis  
 Todd, D. C. .... St. Louis  
 Vogt, G. W. .... St. Louis  
 Vosberg, C. A. .... St. Louis  
 Wells, H. P. .... St. Louis  
 Wilson, A. .... St. Louis

## SCHUYLER COUNTY.

Justice, W. H. .... Lancaster  
 Keller, J. H. .... Glenwood  
 Rambo, J. H. .... Glenwood

## SCOTLAND COUNTY.

Foster, G. E. .... Memphis  
 Petty, J. W. .... Rutledge  
 Shacklett, J. A. .... Rutledge

## SCOTT COUNTY.

Blackledge, Hugh T. .... Commerce  
 Cline, J. L. .... Vanduser  
 Ogilvie, Fred L. .... Blodgett  
 Miller, T. V. .... Sikeston  
 Yount, H. J. .... Sikeston

## SHELBY COUNTY.

Durham, U. S. .... Clarence  
 Daniel, J. R. .... Clarence

## STODDARD COUNTY.

Bilbrey, F. H. .... Pruxico  
 Brandon, J. P. .... Essex  
 Caldwell, W. C. .... Essex  
 Evans, S. M. .... Bloomfield  
 Hill, A. D. .... Dexter  
 Slayden, J. L. .... Dexter

## SULLIVAN COUNTY.

Bowers, H. E. .... Osgood  
 Bradley, U. S. .... Harris  
 Garner, R. L. .... Pollock  
 Holliday, S. J. .... Pollock  
 Herrington, W. .... Green City  
 Mager, R. S. .... Green City  
 Poole, A. R. .... Millan  
 Parsons, Wm. .... Green Castle  
 Roberts, J. M. .... Green City  
 Shepler, R. H. .... Mystic  
 Shriver, C. F. .... Harris  
 Taylor, W. L. .... Green Castle  
 Tunnell, J. D. .... Reger

## VERNON COUNTY.

Altham, A. G. .... Metz  
 Ammerman, I. W. .... Nevada  
 Churchill, E. R. .... Nevada  
 Chambers, J. C. .... Shell City  
 Kelso, Z. C. .... Nevada  
 Primm, W. B. .... Deerfield  
 Ramsey, A. J. .... Walker  
 Royston, W. P. .... Horwood  
 Ross, G. M. .... Horwood  
 Shafer, R. R. .... Panama  
 Talbott, C. W. .... Nevada

## COUNTY SOCIETY NOTES

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### COUNTY SOCIETY NOTES.

Eleven applicants were admitted to membership at the meeting held on October 30th.

A meeting was called for November 27th to consider the change of meetings to monthly sessions.

Officers elected for 1907: President, E. C. Callison; vice president, J. S. Gashwiler; secretary and treasurer, E. C. Grim; delegate, James Hanks.

#### MEETING OF NOVEMBER 27TH.

The Adair County Medical Society made some important changes at a call meeting November 27th, 1906. The society will meet the first Thursday in each month, and a scientific program for the year 1907 is being made up in which each member of the society will present a paper during the year.

Dr. James Hanks was elected representative to the State associations and was also appointed by the society to prepare a paper for the program.

The councilor of the district, Dr. Henry Jurgens, was present at the meeting and gave us many practical suggestions —E. C. GRIM, M. D., Secretary.

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### COLE COUNTY MEDICAL SOCIETY.

Cole County Medical Society held its regular meeting on November 8th and for the first time the scientific program consisted of papers contributed by the members of the society.

Dr. Hill read an excellent paper on the etiology, pathology and diagnosis of diseases of the gall-bladder and ducts. Dr. C. F. Enloe spoke briefly on the medical treatment while Dr. J. DeVoyne Guyot read a very comprehensive paper on the surgical treatment. A general discussion of the subject followed the reading of these papers.

The following were elected to membership: A. H. Rickhoff, Chamois; W. D. Townsley, Chamois; F. H. Cowgill, Morrison; L. F. Briesemeyer, Westphalia; L. A. Bowles, Westphalia; H. S. Gore, Linn; J. F. Jones, Linn; J. Jett, Linn.

On account of inadequate railroad connections, the District Councilor, Dr. G. Ettmueller, has affiliated the physicians in the northern part of Osage and Gasonade counties with the Cole County society. The district as now organized consists of Cole county and the northern

part of Osage and Gasconade counties, and Maries county and the southern part of Gasconade and Osage counties.—G. ETTMUELLER, M. D., President

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### DAVIESS COUNTY MEDICAL SOCIETY.

The meeting of November 27th, was held at Gallatin.

A paper on "Pneumonia" was read by Dr. Hanna of Gallatin. This was very interesting and brought out a liberal discussion.

Our District Councillor, Dr. Miller of Liberty, was present and made an interesting talk on the necessity and the benefits derived from medical organization.

Six new applicants were voted into membership of our society:—Dr. N. G. Sutcliff, Jamesport; Dr. Theodore N. Foster, Dr. S. S. Jerritt, Dr. Frank Hedges, Dr. Anna N. Henery and Dr. J. Z. Parker, Pattonsburg.

Visiting physicians were Dr. White of Spring Hill, Livingston Co., Dr. Patton of McFall, Dr. Hedrick of Madaline, and Dr. Lang of Gallatin.

Our next meeting will be held on the second Tuesday in January at which time there will be an election of officers. We would like to see all members present.—H. E. SONGER, M. D. Reporter.

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### JACKSON COUNTY MEDICAL SOCIETY.

#### MEETING OF NOVEMBER 20TH.

The regular weekly meeting of the Jackson County Medical Society was held in the Club Rooms of the Athenaeum on Tuesday evening, November 20th, 1906. There was an attendance of 66 at this meeting.

A communication from the State Board of Health of Missouri was read calling attention to the fact that more was expected of the County Medical Society than seems to have been accomplished in the past in the work of eliminating quacks from this and other cities of the state: also informing the members of the Jackson County Medical Society that the Committee on Medical Examination, consisting of several members of the Board, would be in session in this city on November 27th, and if possible would be present at the regular meeting of this society.

In connection with the above communication, Dr. Herman E. Pearse, chairman of the Committee on Public Health and Legislation, who has been doing considerable energetic work along this line, made some remarks in criticism of one hospital and one medical college of this city which have in the one instance on its Board of Directors, and in the other on its faculty, a man otherwise of commendable standing in the community, but who has consented to undertake to defend



as objectionable a quack as C. H. Carson, recently arrested for practicing medicine in this state without a license. Dr. Pearse suggested that some steps be taken to inform the heads of the above institutions that the Jackson County Medical Society protested against their relations with the attorney referred to. Accordingly, upon motion of Dr. William Frick, a committee consisting of Drs. William Frick, B. C. Hyde, and J. P. Kanoky was appointed by the chair to wait upon the board of directors of the hospital and the faculty of the medical college, and in behalf of the Jackson County Medical Society, express their disapproval of the aforementioned relations with Mr. J. T. Harding; and to report at the meeting of November 27th.

Applications for membership were received from the following and were referred to the Board of Censors: Thomas E. Wyatt, A. W. McAlester, T. J. Ragsdale, Lee's Summit, Mo., C. E. Wilson, Arthur B. Randolph, C. C. Conover, W. S. Field, J. P. Henderson, J. C. Lynch, Samuel Voegelin, Joel I. Denman, A. J. Swaney, Lee's Summit, Mo., George Howard Hoxie, G. Wilse Robinson, and A. W. McArthur.

The Committee on Banquet, Dr. E. von Quast, chairman, reported, and upon motion the report was received and placed on file.

The report of the Committee appointed to oppose objectionable candidates for the State Legislature was received.

Resolutions in writing were introduced by Dr. E. L. Stewart in condemnation of the reckless and disgraceful newspaper advertising indulged in by the several daily papers of our city, and recommending that the Jackson County Medical Society endorse and assist the praiseworthy efforts of Mr. George Creel of the *Independent*, to eliminate quacks and quack advertisements from this city and county. These resolutions were unanimously adopted.

The motion introduced by Dr. F. T. Van Eman at the meeting of October 23, recommending that the constitution of the society be so changed as to place the regular meeting on alternating Saturday evenings was taken up for consideration. After some remarks by Drs. Van Eman, Hyde, Hertzler, Hardin, Kanoky, Murphy and Frick, ballot was spread and the motion was lost.

The professional program consisted of a paper by Dr. J. M. Allen, of Liberty, Mo., on the subject "Exophthalmic Goiter." This disease being one of the etiology of which is but little understood, the doctor's paper proved of considerable interest particularly from the standpoint of the classes of the disease, its course and its therapeutics.

The discussion was opened by Dr. J. H. Thompson in the absence of Dr. Samuel C. James; Dr. Thompson laid considerable stress on nerve shock as a factor in the cause of this disease. He has seen the affection only in women, and most commonly after a first pregnancy. He thought it was a disturbance of the brain rather than of the sym-

pathetic nervous system. He called attention to the horrible degree of nervousness, which was nearly always present in this disease. While belladonna has done some good in the treatment, the Doctor has seen very much relief from nicotine; but the latter is very difficult to administer, particularly to women. Dr. Thompson thought that surgery would do much to relieve the conditions found in Graves' disease.

Dr. A. E. Hertzler mentioned three cases of exophthalmic goiter wherein improvement followed operation for pelvic lesions: in one case there was a pus-tube, in the others chronic endometritis.

Others taking part in the discussion were Drs. Franklin E. Murphy, E. von Quast, J. P. Kanoky, Herman E. Pearce, C. M. Fulton and Roger B. Brewster. Dr. Allen closed the discussion.

Owing to the lateness of the hour the paper by Dr. J. W. Kyger, on the subject "The Modification of the Proteids in Infant Feeding" was postponed until a subsequent meeting.

#### MEETING OF NOVEMBER 27TH.

The regular weekly meeting was held Tuesday evening, November 27. There was an attendance of 185 at this meeting.

The minutes of the previous regular meeting were read and approved as read.

Applications for membership were received from the following and were referred to the Board of Censors: Eugene H. Kelley, A. C. Boswell, J. G. Lapp, Burrough Agin, J. N. Goodson, S. J. T. Davis, W. A. Henderson, A. W. Harrison, J. W. Albrittain, E. Anderson, and H. N. Carver.

Preceding the professional program, several members of the Missouri State Board of Health, of the Committee on Medical Examination, which was in session in Kansas City on November 26, 27, and 28, made a few remarks concerning some of the duties of the Board, and means whereby efforts toward the prosecution of quacks and irregulars could be successfully carried out. Those present were Drs. J. A. B. Adcock, of Warrensburg, Secretary of the Board, J. T. Thatcher, of Oregon, vice president, and W. S. Thompson, of Armstrong.

Dr. Arnold Lorand of Carlsbad, Austria, addressed the Society on the subject "The Influence of the Ductless Glands on Nervous and Mental Diseases." Those entering upon the discussion of this subject were Dr. John Punton, who opened the discussion, and Drs. H. C. Crowell, G. W. Robinson, A. E. Hertzler, J. M. Langsdale, J. G. Sheldon, and Maggie L. McCrea. Dr. Lorand closed the discussion.

A rising vote of thanks was tendered to Dr. Lorand for his excellent and highly interesting address.

## MEETING OF DECEMBER 4TH.

The Society held its regular weekly meeting in the Club Rooms of the Athenaeum on Tuesday evening, December 4th. Sixty were in attendance at this meeting.

Two communications were read from the chairman of the Committee on Scientific work of the Missouri State Medical Association, in which reference was made to the proposed pathological exhibit which will be a feature of the program at the annual meeting in May, 1907; it was suggested therein that the president of this Society appoint a "Pathologic Committee" of three to co-operate with a similar committee from the University Medical College in the work of formulating plans. Accordingly, the chair appointed Dr. Frank J. Hall, Chairman, Dr. J. F. Binnie and Dr. William K. Trimble.

The membership committee having reported favorably upon each of the following, ballots were separately spread and all were duly elected to membership in this society viz: Drs. George Howard Hoqie, A. W. McAlester, C. E. Wilson, I. J. Ragsdale, A. B. Randolph, Chas. C. Conover, W. S. Field, J. P. Henderson, G. Wilse Robinson, A. W. McArthur, A. G. Swaney, Lee's Summit, Mo., Joel I. Denman, Samuel Voegelin, Thomas E. Wyatt, and J. C. Lynch.

A report from the committee appointed to protest against the relation of Mr. J. T. Hardin with St. Luke's Hospital and the University Medical College was tendered by Doctor William Frick; but on account of its being incomplete a motion was made by the secretary to grant the committee further time; however, a substitute motion by Doctor C. B. Hardin prevailed that the matter be laid on the table and it was so ordered.

The scientific program was of unusual interest; Dr. J. W. Kyger read a paper entitled "The Modification of the Proteids in Infant Feeding." His remarks referred to the alteration of form rather than to the adjustment of quantity of the proteids. He spoke of the use of citrate of sodium in the manner recommended by Cotton and of the late tendency to use more carbohydrates in the food for infants. The digestion of proteids and the importance of changing the character of albuminoids of cow's milk when fed to infants, were ably considered.

Dr. C. S. Merriman opened the discussion with some remarks in reference to the variation in the ability of different babies to digest starch. He spoke of the necessity of the modification of cow's milk in infant feeding and compared the digestion by infants of casein from cow's milk with that from human milk. He also emphasized the value of sodium citrate in the modification of cow's milk.

Others entering into the discussion were Drs. W. M. Cross, H. D. Jerowitz, Franklin E. Murphy, E. H. Skinner, Jos. S. Lichtenberg, and C. B. Hardin. Dr. Kyger closed the discussion.

Dr. E. F. Robinson then reported a case in which he operated for



ventral hernia, the patient three and one-half months pregnant. The doctor did the overlapping operation which has been described by Mayo; he recommended the technic of this method as most effective. This woman was delivered at term after a difficult labor because of a face presentation.

Dr. Arthur E. Hertzler opened the discussion. Drs. Howard Hill, Gordon A. Beedle and F. H. Brunig also taking part.

Dr. O. H. Dove reported the case of a woman with tuberculous peritonitis: in this case, in spite of the fact that the patient gave evidence of a chronic nephritis, the doctor was induced both by a history pointing to obstruction of the gall-ducts and by symptoms of a pyloric obstruction to perform posterior gastroenterostomy and cholecystostomy. He asked the question whether or not he was justified in doing as much as he did in this case, to relieve the complications present. The patient lived for about a week after the operation, when she died of uremia.

Dr. Howard Hill, in the absence of Dr. Jabez N. Jackson, opened the discussion stating that it was his opinion that the woman's physical condition prior to operation contraindicated radical surgical intervention.

Others taking part in the discussion were Drs. E. F. Robinson, B. C. Hyde, Gordon A. Beedle, S. C. James, A. E. Hertzler, John G. Sheldon and C. B. Hardin. The discussion was closed by Dr. Dove.

Dr. E. H. Skinner exhibited some interesting x-ray negatives with the shadow box. Those of special interest were radiographs of the pelvis, skull and of the chest illustrating the outlines of the heart, the ribs and the lungs both in health and disease.

#### MEETING OF DECEMBER 11TH.

The annual meeting of the Jackson County Medical Society was held in the Club Rooms of the Athenaeum on Tuesday evening, December 11th. There was an attendance of one hundred (100) at this meeting.

The report of the secretary for the year 1906 was read and upon motion of Dr. A. A. Freyman the report was received and placed on file. The report of the secretary reads as follows: To the Officers and Members of the Jackson County Medical Society:

As secretary of this society for the year beginning December 14, 1905, and ending December 11, 1906, I beg to leave to submit to you the following report:

There have been 32 regular meetings and one special, making a total of 33, during the year.

The number of those who have contributed to the scientific work of the society during the past year is 75; of this number 70 are members of this Society, while the rest are non-members; these

are Drs. J. M. Allen, of Liberty, Mo., C. C. Goddard, of Leavenworth, Kan., George M. Gray, of Kansas City, Kan., G. W. Grove, of Kansas City, Mo., and Arnold Lorand, of Carlsbad, Austria.

The programs included about an equal number of papers and reports of cases, 4 symposiums, several demonstrations and presentations of pathological specimens, and one address.

The meetings have been well attended the average for the year in attendance being 50. The secretary has paid to the treasurer in dues and admission fees a total of \$1,339.00 and holds the receipts therefore, and orders have been drawn upon the treasurer for current expenses, State dues, contributions, *et cetera*, to the amount of \$1,496.98.

Two members, Drs. J. S. Snider and Susan C. Wadell, have been suspended for non-payment of dues; two, Drs. C. L. V. Hedrick and J. H. Johnson, have withdrawn, and one, Dr. W. C. West, resigned; while the Society has had the misfortune of losing two members on account of death, viz.; Drs. M. P. Sexton and Chas. Lester Spaulding. Hence a total loss in membership of seven during the year.

The membership now numbers 302 with 11 applicants waiting; an increase of 60 members during 1906 against an increase of 45 members during the year 1905. It is indeed gratifying to observe this vast increase.

The secretary has tried to perform to the best of his ability the duties prescribed by the By-Laws of the Society, and required for the welfare of our organization. Respectfully submitted, MAX GOLDMAN, M. D., Secretary.

The report of the treasurer for the year 1906 was read and upon motion of Dr. A. A. Freyman the report was received and filed.

The election of officers, which was by ballot, in accordance with Chapt. III, Sec. I, of the By-Laws, resulted as follows: President, Dr. O. H. Dove, vice president, D. C. B. Hardin, Secretary, Dr. E. L. Stewart, Treasurer, Dr. L. W. Luscher (re-elected) censor, Dr. J. M. Langsdale, (J. W. Kyger, retired.)

Delegates to Missouri State Medical Association: Dr. R. T. Sloan, Dr. A. H. Cordier, Dr. Eugene Carbaugh, Dr. J. P. Kanoky, Dr. F. E. Murphy, (term expires 1908), Dr. J. M. Frankenburger, (term expires 1908), Dr. N. P. Wood, (term expires 1908).

Delegate to meeting of committee on Public Health and Legislation, in St. Louis, Dr. Franklin E. Murphy.

Executive Committee, Dr. Max Goldman, Dr. C. A. Ritter, Dr. F. T. Van Eman, Dr. E. A. Burkhardt, Dr. W. A. Shelton.—MAX GOLDMAN, M. D., Secretary.

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#### HOWARD COUNTY MEDICAL SOCIETY.

The regular meeting of the society was held at Fayette on December 7th.

The resolutions relative to fees for examinations for life insurance, adopted at the last meeting of the State Medical Association, were unanimously endorsed.

Dr. T. C. Richards, formerly of Boone County, and Dr. T. J. Halsey, of Franklin, were elected to membership.

Dr. A. B. Burguin was appointed to prepare a paper for the next meeting of the State Medical Association, the title being "The Duty of Ex-Surgeons for Life Insurance Companies."—C. W. WATTS, M. D., Secretary.

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#### KNOX COUNTY MEDICAL SOCIETY.

At the meeting held on November 5th, the scientific program consisted of a symposium on "Lobar Pneumonia." Dr. George Brown read a paper on the "Symptoms, Diagnosis and Prognosis;" Dr. A. Arnett read a paper on "Treatment." The papers were freely discussed by the members, Dr. James Myers vigorously advocating the quinine treatment of Galbraith.

A communication from the Kentucky Medical Society opposing the reduction of fees for examinations for life insurance was endorsed by the society.

The next meeting will be held on the first Monday in January.—H. JURGENS, M. D., Secretary.

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#### LAWRENCE-STONE COUNTY MEDICAL SOCIETY.

The consolidated counties held their regular meeting in Aurora on December 4th. The following excellent program was fully carried out:

"Pneumonia, the Nightmare of the Profession," by Dr. J. B. Fleming; "Membranous Croup," by Dr. W. W. Rodman; "Dionin: Its Practical Application in Diseases of the Eye," by Dr. W. A. Camp. Report of a case by Dr. N. F. Terry. The discussion following the reading of these papers was full of useful suggestions and practical points.

The following officers were elected for the ensuing year: President F. S. Stevenson; vice president, D. M. Huffman; secretary, C. A. Moore; treasurer, J. P. Baird; censor, W. M. Holmes.

Aurora was selected as the place for the next meeting to be held on March, 5, 1907.—C. A. MOORE, M. D., Secretary.

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#### LEWIS COUNTY MEDICAL SOCIETY.

Regular meeting was held at Canton December 20th. Owing to the bad condition of the roads the attendance was small, but all those present took an active part in the program.



Doctors C. O. Shanks and H. E. Dunlop of Canton were elected delegates to the State meeting.

Dr. Rebo of Canton introduced a resolution instructing the delegates from Lewis County to discuss the present attitude assumed by some life insurance companies in regard to compensation to physicians for making examinations for life insurance. This resolution was adopted.

The next meeting will be held at Quincy May 3rd. Paul F. Cole, Secretary.

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### MARION COUNTY MEDICAL SOCIETY.

The Marion County Medical Society held the regular monthly meeting December 7th at Hannibal. There was a good attendance and much interest manifested.

Some interesting cases were related as having come under observation recently. One case of Dr. Chownings was a negro boy with pistol wound penetrating left lobe of the liver, grazing the lesser curvature of stomach. Operation in median line, with gauze drainage, the patient is recovering.

Dr. Bounds related a case of gall-stones in a woman, with evident rupture of gall bladder or ducts followed by peritonitis and death.

Dr. Howell related the case of a woman 81 years of age—with tumor in nose and throat which was emitting foul odor and breaking down. The tumor removed with snare and curette six weeks ago—and as yet there has been no recurrence.

Dr. Waldo read an interesting paper on "Echinacea." He described it as an alterative and antiseptic, used locally and internally.

Dr. S. G. Smith applied for membership and was adopted as member.

After the program the Annual Election of officers for ensuing year resulted as follow:—President Thos. Chowning; vice president, J. C. Chilton; Secretary and treasurer, H. L. Banks; Reporter, J. J. Bourn; member of Board of Censors for three years, Dr. E. E. Waldo.

The annual banquet will be held in the latter part of January, 1907.—E. H. Bounds, M. D., Reporter

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### MILLER COUNTY MEDICAL SOCIETY.

Miller County Medical Society met at Tusculumbia on Dec. 13th.

Dr. W. L. Allee reported a very interesting case. Dr. Hickman read a paper entitled Puerperal Eclampsia which was well taken and fully discussed. Dr. W. S. Allee was chosen to represent Miller County Medical Society on the scientific program of the State Society which meets at Jefferson City next May.

Dr. Frank DeVilbiss was elected as delegate.

It being the annual meeting the following officers were chosen: President, W. A. Von Grempp; vice president, J. L. Gilleland; treasurer, D. H. Kouns; secretary, W. L. Allee.

The society then adjourned to meet at Tusculumbia in March.—J. L. GILLELAND, M. D., Secretary.

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#### NODAWAY COUNTY MEDICAL SOCIETY.

The Nodaway County Medical Society held its regular monthly meeting at Hopkins December 11th. There was a fair attendance but not as many present as there should have been in view of the fact that there are now in good standing in Nodaway county 35 members.

The members present listened to and discussed two very fine papers.

The first was on the subject of Anesthesia and Anesthetics, by Dr. Frank C. Wallis, of Maryville. The other Intracapsular Fracture of the Femur, by Dr. D. A. Sargent, of Hopkins.

We are making an effort to rid our county so far as possible of illegal practitioners and street venders of nostrums. We have a special committee appointed to look after these matters. It is the duty of all members to furnish this committee with any information concerning illegal practitioners or street venders of nostrums, that the committee may on behalf of the County Medical Society, promptly have them prosecuted.—H. L. SAYLER, M. D., Reporter.

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#### PIKE COUNTY MEDICAL SOCIETY.

At the annual meeting held on December 3rd, in Louisiana, the following officers were elected to serve during the year 1907: President, J. W. Dreyfus Louisiana; vice president J. E. Bankhead Clarksville; second vice president, O. M. Biggs, Louisiana; third vice president, C. A. Smith, Annada; secretary, R. G. Hereford, Louisiana; treasurer, T. G. Hetherlin, Louisiana; board of censors, Drs. Bankhead, Hetherlin, Biggs, Kennedy and Treadway.

The next meeting will be held at Louisiana on the first Monday in January when the following program will be presented: "Pneumonia," by Dr. Treadway; "Treatment of Fractures," by Dr. Biggs; "Post Partum Hemorrhage," by Dr. Pearson; "Typhoid Fever," by Dr. Kennedy.—R. G. HEREFORD, M. D., Secretary.

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#### SCOTT COUNTY MEDICAL SOCIETY.

The Scott County Medical Society met in Commerce Monday, December 3rd, 1906, at 1 o'clock p. m.

Do you believe in the advancement of the medical profession?

Do you believe in a well organized, ethical medical association?

Do you believe you are acting in good faith to the medical profession and laity, when you are not a member of your county association?

There will be papers read at this meeting as follows: Dr. T. F. Frazer, Enterocolitis; Dr. W. H. Wescoat, Placenta Previa; Dr. Milem, Malaria.

If you are interested, come to this meeting at Commerce Monday, December 3rd, 1906.—U. P. HAW, M. D., Secretary.

[The above was sent to the physicians of Scott county prior to the meeting held at Commerce on December 3rd. We trust the results were all that could be desired and look forward with much interest to a report of this meeting.—Ed.]

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### SHELBY COUNTY MEDICAL SOCIETY.

Shelby County Medical Society met at Lentner on October 31st, the subject for the evening being a symposium on Typhoid Fever. The following papers were presented: Etiology and Pathology, by Dr. Singleton; Prophylaxis and Diet, by Dr. Smith; Medical Treatment, by Dr. Carson. The meeting was well attended and the papers read proved interesting and profitable.—A. M. Wood, M. D., Reporter.

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### STE. GENEVIEVE COUNTY SOCIETY.

The Ste. Genevieve County Medical Society held its regular monthly meeting November 14th. As none of the members present had a paper, the time was devoted to a discussion and exchange of experiences. Dr. Hirsch made a special request that all members be present at next meeting for election of officers for ensuing year.

No further business appearing the society adjourned until second Wednesday in December.—R. W. LANNING, M. D., Secretary.

#### MEETING OF DECEMBER 12TH.

Dr. Hinch read a paper on "Membranous Croup, or Laryngeal Diphtheria." Dr. Lanning read a paper on "The Eruption of Vari-cella."

The application of Dr. Edw. Ford, of River Auxvases, for membership was received and tabled until next meeting.

The election of officers resulted in the re-election of the same ones as were in office during preceding year, viz: C. Moore, president; F. E. Hinch, vice president; R. W. Lanning, secretary and treasurer.

No further business appearing the society adjourned until second Wednesday in January, 1907.—R. W. LANNING, M. D., Secretary.



## ST. LOUIS COUNTY MEDICAL SOCIETY.

At the annual meeting of the St. Louis County Medical Society held December 12th, the following officers were elected for 1907: President, F. E. Guibor, Maplewood; vice president, N. N. Jensen, Florissant; secretary-treasurer, R. D. Moore, Central; censor, three years, L. W. Cape, Maplewood; delegate, two years, W. H. Townsend, Maplewood.—R. D. MOORE, M. D., Secretary.

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## VERNON COUNTY MEDICAL SOCIETY.

The Vernon County Medical Society met in regular session at Nevada, December 6.

A paper entitled, "The Relation of the Eye to Some of the Diseases of the Nervous System." Discussion by Drs. Dulin and McLemore.

This being the meeting for the annual election of officers, the following were elected for the coming year: President, W. T. Bohannon; vice president, J. M. Yater; secretary, T. McLemore; board of censors, T. B. M. Craig.

Dr. Dulin on his retiring from the presidency of the society, delivered a very able and appropriate address.

It was moved and carried that Dr. Dulin's paper be sent to the JOURNAL OF THE STATE MEDICAL ASSOCIATION for publication.—T. McLEMORE, M. D., Secretary.

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## WORTH COUNTY MEDICAL SOCIETY.

The society met in regular session at Grant City on December 19th. Our District Councilor, Dr. W. E. McKinley, was present and acted as chairman of the meeting.

After transacting routine business and reading of papers, officers for the ensuing year were elected as follows: President, Arch Long, Denver; vice president, Villa Gately, Grant City; second vice president, H. W. Mills, Grant City; secretary-treasurer, J. K. Phipps, Grant City; censor, J. D. F. Dove, Allendale.

The society endorsed the proposed law to reduce the time in which suit for mal-practice may be brought against physicians from five years to one year, and instructed its secretary to communicate with our representative advising him of this action.—J. K. PHIPPS, Secretary.

## BOOK REVIEWS

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**SURGERY: ITS PRINCIPLES AND PRACTICE.** In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M. D., LL. D., Hon. F.R.C.S., Eng. and Edin., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Phila. Vol. I: Octavo of 983 pages, with 261 text-illustrations and 17 colored plates. Philadelphia and London: W. B. Saunders Company, 1906. Per volume: Cloth, \$7.00 net; Half Morocco, \$8.00 net.

This entirely new surgery, edited by Dr. W. W. Keen, consists of five large octavo volumes covering the entire field of surgery in a thorough and complete manner. It has been possible to secure as authors of the various articles men whose names are specially associated with the subjects upon which they have written—renowned specialists with international reputations accepted as authorities throughout the surgical world. Every chapter represents a complete and original monograph by an authority of recognized eminence, the entire work being written by the leaders of modern surgery.

The first volume begins with a historical sketch of the development of surgery written by J. Gregory Mumford. An interesting essay by Crile on surgical physiology is followed by a chapter on the examination of the blood, contributed by J. C. Da Costa. In the next seven chapters the following topics are considered: Infection, immunity, inflammation, suppuration, ulceration, mortification, process of repair, thrombosis and repair. The authors of these chapters are Hektoen, Adami, Freeman, Wood and Frazier. Next are taken up erysipelas, tetanus, diseases caused by special infections and those derived directly from animals. There are five chapters devoted to a general consideration of scurvy, rickets, tuberculosis, chancre and syphilis. The next chapter on tumors by John Bland-Sutton is one of special excellence. Crile concludes this splendid volume of more than 900 pages with an article on wounds and contusions.

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**CLINICAL BACTERIOLOGY AND HAEMATOLOGY.** By W. D'Este Emery, M. D., B. Sc. London. Clinical Pathologist to King's College Hospital etc., etc. Being the second edition of "Handbook of Bacteriological Diagnosis for Practitioners." Philadelphia, P. Blakiston's Son & Co. 1906.

Extensive alterations are noticeable in this second edition. Additions to the bacteriologic portion are mostly concerned with the examination of materials from special parts of the body, such as the mouth, conjunctiva, etc., which were insufficiently dealt with in the first edition. The hematologic portion is almost entirely new. The manner in which this difficult subject is presented is eminently prac-

tical. First an explanation is given of the conditions under which an examination is indicated and then the method employed is described in full detail; the deductions to be drawn from the results obtained are set forth, and finally the author considers the caution necessary to avoid a wrong interpretation of the findings.

No practitioner who intends to practice the science of medicine in accord with modern ideas can neglect any means that will help him to arrive at the proper diagnosis. This principle makes the importance of books like the one before us at once obvious.

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**PREVALENT DISEASE OF THE EYE.** By Samuel Theobald, M. D., Clinical Professor of Ophthalmology and Otology, John Hopkins University. Octavo of 551 pages, with 219 text-illustrations, and 10 colored plates. Philadelphia and London. W. B. Saunders Company, 1906. Cloth, \$4.50 net; Half Morocco, \$5.50 net.

With few exceptions all the works on diseases of the eye, although written ostensibly for the general practitioner, are in reality adapted only to the specialist; but Dr. Theobald in his book has described very clearly and in detail only those conditions the diagnosis and treatment of which come within the province of the physician engaged in general practice. In every case only one course of definite treatment is given. There are over two hundred illustrations.

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**ABDOMINAL OPERATIONS.** By B. G. A. Moynihan, M. S. (London), F. R. C. S., Senior Assistant Surgeon at Leeds General Infirmary, England. *Second Revised Edition, Greatly Enlarged.* Octavo of 815 pages, with 305 original illustrations. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, \$7.00 net; Half Morocco, \$8.00 net.

This work, the new second revised edition of which has just been issued, details in exact language the various abdominal operations. The author has achieved complete success in illustrating, both by words and pictures, the best technic of the abdominal operations. Peritonitis and appendicitis have been accorded unusual consideration. The beautiful illustrations have been specially drawn.

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**OBSTETRICS FOR NURSES.** By Joseph B. DeLee, M. D., Professor of Obstetrics in the Northwestern University Medical School, Chicago. *Second Revised Edition.* 12mo of 510 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, \$2.50 net.

In this new book Dr DeLee presents a work of the greatest value not alone to the nurse, but also to the practitioner, upon whom the duties of a nurse often devolve in the early years of his practice.



A PRIMER OF PSYCHOLOGY AND MENTAL DISEASE. For Use in Training Schools for Attendants and Nurses and in Medical Classes, and as a Ready Reference for the Practitioner. By C. B. Burr, M. D., Medical Director of Oak Grove Hospital (Flint, Mich.) for Mental and Nervous Diseases. Third Edition. Thoroughly Revised, with illustrations. Pages viii-183, 12mo. Bound in Extra Vellum Cloth, \$1.25 net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

The leading feature of this little volume is the simplification of the study of psychology by the introduction of short definitions and the use of plain language in the description of mental processes. In part II mental diseases are discussed in their symptomatology from the psychologic side. In this section is given the modern classification of the various forms of insanity and their treatment. Part III and IV treat with the management of cases of insanity, considered both from the medical and surgical standpoint.

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#### MISSOURI HISTORICAL REVIEW.

STATE HISTORICAL SOCIETY OF MISSOURI, COLUMBIA, MISSOURI.

The State Historical Society of Missouri has just issued the first number of the Missouri Historical Review, a quarterly publication of the Society. The contents include the following articles of interest and value on various phases of the history of the west and of Missouri: The Romance of Western History, by Professor E. G. Bourne of Yale University; Thomas Hart Benton, by Judge T. J. C. Fagg of Pike county; The Beginnings of Missouri Legislation, by Dr. Isidor Loeb of Columbia; Early Settlements in Missouri, by Professor E. M. Violette of Kirksville; Genealogy of the Lincoln, Hanks, and Boone families, by President H. E. Robinson, of Maryville; Bibliography of Official Publications of Missouri in 1906, by Mr. F. A. Sampson, Secretary of the Society. There are also Notes and News as to historical societies, etc. The purpose of the publication is to stimulate an interest in the history of the State and in the preservation of historical material and to furnish an opportunity for the publication of papers on all aspects of the history and development of Missouri. The Review is sent to all members of the Society. Any person may become a member upon application to the Secretary, Mr. F. A. Sampson, Columbia, Missouri, and the payment of the annual subscription of \$1.00.

# County Societies in Affiliation with the State Medical Association

County.	President.	Address of President.	Secretary.	Address of Secy.
Adair	E. C. Collison	Kirksville	E. C. Grim	Kirksville
Andrew	D. B. Bryant	Savannah	C. O. Jeffries	Savannah
Atchison	W. G. Stafford	Tarkio	A. McMichael	Rockport
Audrain	C. A. Rothwell	Mexico	E. S. Cave	Mexico
Barry	Wm. M. West	Monett	D. L. Mitchell	Cassville
Barton	G. D. Allee	Lamar	J. L. McComb	Lamar
Bates	J. R. Coulson	Spruce	E. N. Chastain	Rich Hill
Benton	G. S. Gresson	Lincoln	S. O. Davis	Warsaw
Boone	I. E. Thornton	Columbia	W. A. Norris	Columbia
Buchanan	P. I. Leonard	St. Joseph	Chas. W. Fassett	St. Joseph
Butler	J. J. Norwine	Poplar Bluff	Ira W. Seybold	Poplar Bluff
Caldwell	R. K. Dodge	Polo	Tinsley Brown	Hamilton
Callaway	I. F. Harrison	Fulton	Martin Yates	Fulton
Camden	G. M. Moore	Linn Creek	G. T. Myers	Macks Creek
Cape Girardeau	H. L. Cunningham	Cape Girardeau	I. D. Porterfield, Jr.	Cape Girardeau
Carroll	W. C. Baird	Bogard	R. F. Cook	Carrollton
Carter-Shannon	F. Hyde	Eminence	W. F. Chaffin	Van Buren
Cass	H. A. Brerly	Peculiar	J. A. Chilton	Raymore
Cedar	Kimball Hill	El Dorado Springs	J. W. Dawson	El Dorado Springs
Chariton	J. R. Gaines	Mussel Fork	C. A. Jennings	Salisbury
Christian	I. C. Young	Ozark	J. A. Roberson	Ozark
Clark	H. W. Harris	Winchester	A. H. Teel	Kahoka
Clay	L. J. Jones	Linden	F. H. Matthews	Liberty
Clinton	John Sturgis	Perrin	E. A. Colley	Plattsburg
Cole	G. E. Etmueller	Jefferson City	A. W. McAlester	Jefferson City
Cooper	O. W. Cochran	Gooch Mill	J. R. Lionberger	Boonville
Crawford	W. A. Metcalf	Steelville	A. H. Horn	Steelville
Daviess	W. L. Brosius	Gallatin	M. A. Smith	Gallatin
DeKalb	H. P. Yeater	Maysville	R. A. Evans	Amity
Dent	A. F. McMurtrey	Salem	J. C. Welch	Salem
Dunklin	N. F. Kelley	Kennett	G. L. Johnson	Kennett
Franklin	H. A. Booth	Pacific	A. C. Brown	Moselle
Gasconade-Marie				
Osage	J. J. Ferrell	Owensville	J. W. Nieweg	Lois
Gentry	G. W. Whiteley	Albany	J. N. Conrad	Albany
Greene	G. W. Barnes	Springfield	Robt. M. Cowan	Springfield
Grundy	N. E. Sutton	Trenton	D. W. Coon	Trenton
Harrison	A. H. Vandivert	Bethany	W. H. Wiley	Ridgeway
Henry	W. H. Benway	Deepwater	F. M. Douglass	Clinton
Holt	C. L. Evans	Oregon	J. F. Chandler	Forest City
Howard	N. E. Smith	Fayette	C. W. Watts	Fayette
Howell	A. H. Thompson	Lanton	A. H. Thornburgh	West Plains
Iron	R. W. Gay	Ironton	Ira A. Marshall	Ironton
Jackson	O. H. Dove	Kansas City	E. L. Stewart	Kansas City
Jasper	J. D. Pifer	Joplin	R. M. James	Joplin
Jefferson	J. W. Pickel	Crystal City	C. G. Harris	Festus
Johnson	W. H. Farrar	Warrensburg	E. H. Gilbert	Warrensburg
Knox	L. S. Brown	Edina	Henry J. Jurgen	Edina
Laclede	J. C. Jacobs	Conway	P. L. Pritchett	Lebanon
Lafayette	P. S. Fulkerson	Lexington	C. T. Ryland	Lexington
Lawrence-Stone	F. S. Stevenson	Aurora	C. A. Moore	Aurora
Lewis	J. C. Brown	Lewistown	Paul F. Cole	Steffenville
Lincoln	S. R. McKay	Troy	Wm. P. Smith	Troy
Linn	J. W. Mason	Brookfield	Foster Burke	Laclede
Livingston	L. E. Tracy	Chillicothe	W. M. Girdner	Chillicothe
McDonald	E. F. Doty	Anderson	M. L. Sellers	Anderson
Macon	W. H. Miller	Macon	C. W. Reagan	Macon
Madison	C. A. Anthony	Fredericktown	S. C. Slaughter	Fredericktown
Marion	Richard Schmidt	Hannibal	H. L. Banks	Hannibal
Mercer	H. P. Chesmore	Princeton	C. R. Buren	Princeton
Miller	G. A. Von Grempe	Iberia	W. L. Allee	Eldon
Mississippi	G. R. Wallace	Bertramd	R. K. Ogilvie	Charleston
Moniteau	J. M. Robertson	Latham	W. R. Patterson	Tipton
Monroe	S. M. Brown	Monroe City	M. C. McMurry	Paris
Morgan	W. L. Hatler	Barnett	J. T. Beale	Versailles
New Madrid	Welton O'Bannon	New Madrid	C. W. Watson	New Madrid
Newton	R. L. Wills	Neosho	Horace Bowers	Neosho
Nodaway	F. R. Anthony	Maryville	H. L. Saylor	Elmo
Pemiscot	J. G. Luten	Caruthersville	John Johnson	Hayti
Perry	T. M. Hudson	Perryville	F. M. Vessells	Perryville
Pettis	W. C. Overstreet	Sedalia	W. J. Ferguson	Sedalia
Phelps	W. H. Bruer	St. James	S. L. Baysinger	Rolla
Pike	J. W. Dreyfus	Louisiana	R. G. Hereford	Louisiana
Platte	C. H. Chastain	Weston	G. C. Coffey	Platte City
Pulaski	W. L. Ragan	Richland	G. W. Orrick	Crocker
Putnam	C. H. Carryer	Hartford	T. A. Townsend	Unionville
Ralls	S. S. Harwood	Rensselaer	T. J. Downing	New London
Randolph	G. O. Cuppaidge	Moberly	W. M. Dickerson	Renick
Ray	L. D. Greene	Richmond	E. F. Higdon	Richmond
Reynolds	J. M. Lowrey	Centerville	T. W. Chilton	Corridon
Ripley	S. A. Proctor	Doniphan	J. F. Redwine	Doniphan
Saline	D. C. Gore	Marshall	D. F. Bell	Marshall
St. Charles	J. R. Mudd	St. Charles	B. K. Stumberg	St. Charles
St. Clair	W. Cline	Appleton City	D. B. Williams	Osceola
St. Francois	J. L. Haw	Farmington	A. L. Evans	Bonne Terre
Ste. Genevieve	C. Moore	St. Marys	R. W. Lanning	St. Genevieve
St. Louis	J. C. Morfit	Humboldt Bldg	Davis Forster	5249 Raymond
St. Louis Co.	R. E. Guibor	Maplewood	R. D. Moore	Central
Schuyler	J. T. Jones	Queen City	H. E. Gerwig	Downing
Scotland	W. E. H. Bondurant	Memphis	A. E. Platter	Memphis
Scott	T. F. Frazier	Commerce	C. P. Haw	Benton
Shelby	L. W. Dallis	Hunnewell	A. M. Wood	Lentner
Stoddard	T. B. Wingo	Dexter	Ed. Moore	Bloomfield
Sullivan	J. C. Kessinger	Milan	J. S. Montgomery	Milan
Vernon	W. T. Bohannan	Nevada	T. McLemore	Nevada
Warren	W. J. Alexander	Marthasville	E. A. Fluesmeier	Wright City
Washington	J. A. Eaton	Belgrade	W. S. Smith	Belgrade
Wayne	J. P. Sebastain	Patterson	R. J. Owens	Mill Spring
Worth	Arch Long	Denver	J. K. Phipps	Grant City

# MEETINGS OF THE COUNTY MEDICAL SOCIETIES

County.	Date of Meeting.
Adair.....	Monthly. First Thursday.
Andrew.....	Monthly. First Wednesday.
Atchison.....	Quarterly. January, April, July, October.
Audrain.....	Monthly. First Monday.
Barton.....	Quarterly. First Thursday, May, Aug., Nov., Feb.
Bates.....	Quarterly. Last Thursday in Feb., May, Aug. and Nov.
Barry.....	
Benton.....	Quarterly. First Tuesday, January, April, July, October.
Boone.....	Monthly. First Monday.
Buchanan.....	Semi-Monthly. Second and Fourth Wednesday.
Butler.....	Monthly. Last Friday.
Caldwell.....	Quarterly. July, October, January, April.
Callaway.....	Monthly. Second Thursday.
Camden.....	Quarterly. Second Monday, April, July, Oct., and Jan.
Cape Girardeau.....	Monthly. Second Wednesday.
Carroll.....	Monthly. Second Tuesday.
Carter-Shannon.....	Quarterly. February, May, August and November.
Cass.....	Quarterly. First Thursday, March, June, Sept., Dec.
Cedar.....	Monthly.
Chariton.....	Monthly. Last Thursday.
Christian.....	
Clark.....	Bi-Monthly. First Mondays, Feb., April, June, Aug., Oct., Dec.
Clay.....	Monthly. Last Monday.
Clinton.....	Monthly. First Tuesday.
Cole.....	Quarterly. Second Thursday of Jan., April, July, Oct.
Cooper.....	Monthly. First Tuesday.
Crawford.....	Quarterly. First Tuesday, April, July, October, January.
Daviess.....	Quarterly. January, April, July, October.
DeKalb.....	
Dent.....	
Dunklin.....	Monthly. Second Tuesday.
Franklin.....	Monthly. First Tuesday.
Gasconade-Maries-Osage.....	Semi-Annual. Fourth Thursday, April and October.
Gentry.....	Monthly.
Greene.....	Semi-Monthly. Second and Fourth Friday.
Grundy.....	Quarterly. July, October, January, April.
Harrison.....	Quarterly. Third Tuesday, January, April, July, October.
Henry.....	Quarterly. Second Wednesday, Dec., March, June, Sept.
Holt.....	Quarterly. First Thursday, January, April, July, October.
Howard.....	Monthly. First Friday.
Howell.....	Bi-Monthly. First Thursday of Dec., Feb., April, June, Aug., Oct.
Iron.....	Monthly. First Saturday.
Jackson.....	Semi-Monthly. Second and Fourth Thursdays.
Jasper.....	Semi-Monthly. First and Third Mondays.
Jefferson.....	Quarterly. Fourth Tuesday, Jan., Apr., July, Oct.
Johnson.....	Quarterly. June, September, December, March.
Knox.....	Monthly. First Monday.
Laclede.....	Quarterly. Second Monday, Jan., April, July, Oct.
Lafayette.....	Monthly. Second Tuesday, Jan., Mch., May, July, Sept., Nov.
Lawrence.....	Monthly.
Lawrence-Stone.....	
Lincoln.....	Quarterly. May, August, November, February.
Linn.....	Bi-Monthly. Jan., March, May, July, Sept., Nov.
Livingston.....	Monthly. Third Wednesday.
McDonald.....	Quarterly. Second Wednesday, Jan., April, July, Oct.
Macon.....	Monthly. Second Tuesday, 10 a. m.
Madison.....	Semi-Monthly. First and Third Tuesday.
Marion.....	Monthly. First Friday.
Mercer.....	Monthly. Second Thursday.
Miller.....	Quarterly. First Thursday of March, June, Sept. and Dec.
Mississippi.....	Monthly. First Monday.
Moniteau.....	Quarterly. March, June, September, December.
Monroe.....	Quarterly. First Tuesday of April, July, October, January.
Morgan.....	Quarterly. First Wednesday of March, June, Sept., Dec.
New Madrid.....	
Newton.....	Monthly. Second Tuesday.
Nodaway.....	Monthly. Second Tuesday.
Pemiscot.....	Quarterly. First Tuesday, January, April, July, November.
Perry.....	Monthly. First Wednesday.
Pettis.....	Semi-Monthly. First and Third Monday.
Phelps.....	Quarterly. March, June, September, December.
Pike.....	Monthly.
Platte.....	Monthly. First Wednesday.
Pulaski.....	Quarterly. November, February, May, August.
Putnam.....	Monthly. First Wednesday.
Ralls.....	Quarterly. January, April, July and October.
Randolph.....	Monthly. Second Tuesday.
Ray.....	Monthly. Third Wednesday.
Reynolds.....	Quarterly. January, March, June, October.
Ripley.....	
Saline.....	Monthly. Second Tuesday.
St. Charles.....	Monthly.
St. Clair.....	Quarterly. Second Tuesday, March, June, Sept., Dec.
St. Francois.....	
St. Genevieve.....	Monthly. Second Wednesday.
St. Louis.....	Weekly. Saturdays.
St. Louis County.....	Monthly. Second Wednesday.
Schuyler.....	Semi-Annually. July and December.
Scotland.....	Monthly. Second Tuesday.
Scott.....	Monthly.
Shelby.....	Quarterly. June, September, December, March.
Stoddard.....	Bi-Monthly. First Wednesday, Jan., Mch., July, Sept., Nov.
Sullivan.....	Monthly.
Vernon.....	Quarterly. First Tuesday, March, June, Sept. and Dec.
Warren.....	Monthly.
Washington.....	Monthly. First Saturday.
Wayne.....	Monthly.
Worth.....	Monthly. Second Wednesday.



## AMERICAN MEDICAL ASSOCIATION.

### Next Annual Meeting at Atlantic City, 1907.

President: WM. J. MAYO, Rochester, Minn.  
President Elect: JOSEPH D. BRYANT, New York City.  
Secretary and Editor: GEORGE H. SIMMONS, 103 Dearborn Ave., Chicago.

## MISSOURI STATE MEDICAL ASSOCIATION.

### Next Annual Meeting, Jefferson City, May, 1907.

President: C. H. WALLACE, St. Joseph.  
Vice-Presidents:  
F. W. ALLEN, Callao; W. G. COWAN, Sedalia; C. J. ORR, St. Louis; E. H. THRAILKILL, Kansas City; H. L. RIED, Charleston  
Secretary: C. M. NICHOLSON, St. Louis.  
Assistant Secretary: GAIL ALLEE, Lamar.  
Assistant Secretary: H. A. McDONALD, Pisgah.  
Treasurer: J. FRANKLIN WELCH, Salisbury.

#### Medical Section.

Chairman: J. H. P. BAKER, Salisbury.  
Secretary: GAIL ALLEE, Lamar.

#### Surgical Section.

Chairman: WARREN B. OUTTEN, St. Louis.  
Secretary: H. A. McDONALD, Pisgah.

#### ORATORS.

##### Oration in Medicine:

WM. F. KUHN, Farmington.

##### Oration in Surgery:

PAUL Y. TUPPER, St. Louis.

#### COMMITTEES:

##### Committee on Scientific Work.

C. M. Nicholson, Chairman; J. C. Morfit, F. E. Murphy.

##### Publication Committee.

C. M. Nicholson, Chairman; W. B. Dorsett; B. M. Hypes; W. G. Moore.

##### Committee on Public Health and Legislation.

F. J. Lutz, Chairman; Geo. Homan, H. E. Pearse.

##### Committee on Medical Education.

Woodson Moss, Chairman; W. B. Dorsett, Robt. T. Sloan.

##### Committee on Tuberculosis.

Wm. Porter, Chairman; J. M. Allen; W. S. Allee; B. H. Zwart.

## COUNCILLOR DISTRICTS AND COUNTIES IN EACH DISTRICT.\*

- First District.—Councillor, E. E. Parrish, Memphis. Counties: Clark, Scotland, Schuyler.
- Second District.—Councillor, H. Jurgens, Edina. Counties: Adair, Knox, Lewis.
- Third District.—Councillor, J. D. Brummall, Salisbury. Counties: Chariton, Carroll, Livingston, Linn.
- Fourth District.—Councillor, C. R. Buren, Princeton. Counties: Grundy, Sullivan, Mercer, Putnam.
- Fifth District.—Councillor, E. H. Miller, Liberty. Counties: Platte, Clay, Ray, Clinton, Caldwell, Daviess.
- Sixth District.—Councillor, W. E. McKinley, Denver. Counties: Harrison, Worth, Gentry, DeKalb.
- Seventh District.—Councillor, W. T. Elam, St. Joseph. Counties: Buchanan, Holt, Atchison, Nodaway, Andrew.
- Eighth District.—Councillor, L. W. Dallas, Hunnewell. Counties: Shelby, Marion, Ralls.
- Ninth District.—Councillor, C. W. Reagan, Macon. Counties: Macon, Randolph, Monroe.
- Tenth District.—Councillor, Woodson Moss, Columbia. Counties: Audrain, Boone, Howard, Callaway, Warren, *Montgomery*.
- Eleventh District.—Councillor, W. B. Dorsett, St. Louis. Counties: Lincoln, St. Charles, St. Louis, Pike.
- Twelfth District.—Councillor, F. J. Lutz, St. Louis. Counties: Franklin.
- Thirteenth District.—Councillor, B. M. Hypes, St. Louis. Counties: Jefferson, St. Genevieve, Perry.
- Fourteenth District.—Councillor, Wm. F. Kuhn, Farmington. Counties: *Washington*, Reynolds, Iron, St. Francis.
- Fifteenth District.—Councillor, J. J. Norwine, Poplar Bluff. Counties: Mississippi, New Madrd, Wayne, Stoddard, Dunklin, Butler, Ripley, Carter, Pemiscot.
- Sixteenth District.—Councillor, J. D. Porterfield, Jr., Cape Girardeau. Counties: Scott, Madison, Cape Girardeau, *Bollinger*.
- Seventeenth District.—Councillor, W. S. Allee, Olean. Counties: Miller, Moniteau, Morgan, Camden.
- Eighteenth District.—Councillor, G. Ettmueller, Jefferson City. Counties: Cole, Osage, Maries, Gasconade.
- Nineteenth District.—Councillor, R. D. Haire, Clinton. Counties: Pettis, Henry, Benton, St. Clair, *Hickory*.
- Twentieth District.—Councillor, C. T. Ryland, Lexington. Counties: Lafayette, Saline, Cooper.
- Twenty-first District.—Councillor, M. P. Overholser, Harrisonville. Counties: Jackson, Cass, Johnson.
- Twenty-second District.—Councillor, J. R. Buchanan, Nevada. Counties: Bates, Vernon, Barton.
- Twenty-third District.—Councillor, A. R. Snyder, Joplin. Counties: McDonald, Newton, Jasper, Cedar, *Dade*.
- Twenty-fourth District.—Councillor, R. L. Johnson, Rolla, Counties: Crawford, Phelps, Pulaski, Laclede, Dent, *Dallas*.
- Twenty-fifth District.—Councillor, T. A. Coffelt, Springfield. Counties: Greene, Lawrence, Barry, Stone, Christian, *Webster*, Polk, Taney.
- Twenty-sixth District.—Councillor, H. C. Shuttee, West Plains. Counties: Howell, Shannon, *Ozark*, Oregon, Texas, *Wright*, Douglass.

\*Counties in *italic* are unorganized.

# JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

Volume III

FEBRUARY, 1907

Number 8

## ORIGINAL ARTICLES

### THE TREATMENT OF GASTRIC ULCER.

BY FRANKLIN E. MURPHY, M. D., KANSAS CITY, MO.

The oft quoted statistics of Greenough and Joslin (*Amer. J. M. Sci.*, No. 328), those of C. P. Howard, and those from the Johns Hopkin's Hospital (Pract. Med. Osler Vi Ed.) give us a conception of the frequency of gastric ulcer in America.

The first mentioned investigators were able to determine the relative frequency of the disease in different parts of the United States as shown by the following table:

MEDICAL ADMISSIONS.	DIAGNOSIS OF GASTRIC ULCER.
Massachusetts General Hospital, Boston..13,097	187 or 1.43 per cent
Johns Hopkins Hospital, Baltimore..... 9,517	30 or 0.32 per cent
Cook County Hospital, Chicago..... 3,930	6 or 0.15 per cent
Arapahoe County Hospital, Denver..... 5,040	6 or 0.12 per cent

Howard analyzed the records of 161,589 medical admissions into American Hospitals, finding 930 instances of gastric ulcer or 0.57 per cent. In fifteen years 44,378 admissions in all services of Johns Hopkins Hospital afforded 0.18 per cent. of cases of the disease.

From the above it appears that gastric ulcer occurs with varying frequency in different parts of the United States, occurring much oftener in New England than in other localities from which statistics are available.

The disease occurs more frequently in Great Britain and the Continent than in America as is shown by statistics from the following named cities.

Edinburgh, 2.2 per cent. of medical admissions.

Berlin, 1.33 per cent. of medical admissions.

London, .74 per cent. of medical admissions.

According to Welch (Pepper's Sys. Med.) who is so widely quoted, in 32,052 autopsies made in Prague, Berlin, Dresden, Erlangen and Keil, open ulcers or cicatrices were found in about five per cent. of persons dying from all causes. Welch states: "It may be considered reasonably certain that at least in Europe open gastric ulcers are found

on the average in from one or two per cent. of persons dying from all causes." The ratio of cicatrices to open ulcers he places at three to one. In different parts of the Continent the disease varies in frequency. Backmann (abs. *Wiener Klin. Woch.*, May 4th-04) in a study of the frequency of gastric ulcer in Finland, states that in 3577 autopsies made in Helsingfors, ulcer was found in eighty-two cases, 2.29 per cent., concluding that the disease is as prevalent in Finland as in other countries. He comments upon the rarity of the disease in Russia and Galacia, stating that in 6000 autopsies made at Alexander Hospital in St. Petersburg, ulcer of the stomach was encountered but twice. In the Marie Magdalen Hospital with 3,500 admission yearly, in the years of 1886 and 1887, not one case of the disease was seen.

It is said that the disease is common in Eastern Siberia. In Northern Germany and Denmark the disease is frequently encountered. In France the disease does not prevail to the extent it does in Great Britain or Germany.

The greater susceptibility of women to gastric ulcer is well known. Welch found in 1699 cases, 40 per cent. male and 60 per cent. female. Brinton (Welch) puts its average higher—two to one.

In cases studied by Greenough and Joslin, the proportion was 157 females, 30 males—five to one.

It has been found that the disease is most frequent in women from twenty to thirty years, in men from thirty to forty years.

Osler states (*Pract. Med.* 6 Ed.) that in eighty-two cases observed by him forty-eight were males, twenty eight females. Comparing this with the ratio of women to men seen in the Boston series, the contrast is very striking. It is true the cases analyzed by Greenough and Joslin show a much greater susceptibility of females to gastric ulcer than do other statistics with very few exceptions. "The explanation of this great preponderance of ulcer cases in females in Boston we must leave un-answered," they state.

A conclusion arrived at by Greenough and Joslin from their studies of the cases at the Massachusetts General Hospital is that there is much to suggest a distinct variety of the disease in the two sexes. Thus in the cases analyzed the mortality among males was 30 per cent, among females 9 per cent.

Hemorrhage causes the death of 17 per cent. of the male patients, but only 1.27 per cent of the females.

The average age in men is 37 years; in women 27 years.

In eighty-two cases seen in Johns Hopkins Hospital by Osler, the larger number of cases in females occurred between fifteen and twenty-five years. In men the larger number of cases occurred between forty and fifty years.

No one view of the pathogenesis of gastric ulcer, round ulcer or peptic ulcer is accepted by all and whether or not the first cause



of round ulcer of the stomach has been determined, certain facts have been established which afford positive indications for the treatment. We may, I think with profit, briefly review factors ascribed as etiological and predisposing.

Van Ijzeren by nerve section in rabbits, below the diaphragm, found that after a time pylorus cramp followed and later ulcer without hyperchlorhydria or other changes in the acid secretion. This has attracted much attention and the nerve theory of the production of gastric ulcer seemed to be strongly reinforced. Donati (*Abs. Wiener Med. Woch.*, October, 1904) in experiments upon thirty-seven animals, was unable to confirm Van Ijzeren results and concludes that an altered nerve function as the main cause of gastric ulcer is not to be thought of.

Bloch, of Copenhagen (*Abs. Muenchener Med. Woch.*, April 25, 1905) explains the frequency of occurrence of ulcer of the stomach at the lesser curvature and near the pylorus, upon anatomical grounds. He has found upon careful investigation that the pyloric part and the part along the lesser curvature, have practically the same appearance in dilated and contracted states of the stomach, while the musculature of the remainder of the stomach forcibly contracts into wrinkles so that areas denuded of epithelium are protected from the action of gastric juice. Hemorrhages into the mucous membrane and hyperacidity of the gastric juice oftenest play a part in the production of gastric ulcer. He believes micro-organism plays an unimportant part in the production of round ulcer.

Grawitz (*Klin. Pathologie des Blutes*, p. 445) states that "the function of the stomach and the diseases of the stomach are closely associated with the conditions of the blood."

Anaemia and altered conditions of the blood predispose to certain diseases of the stomach, particularly through faulty nutrition of the mucous membrane of the stomach, round ulcer may develop.

It has been shown by Quincke and Daetwyler that when by repeated venesection animals were rendered anaemic, it was possible by wounding the gastric mucous membrane, to induce ulceration, and further by Silverman who by experimentation showed that when hemoglobinaemia was induced by injection into the blood of the animal, hemoglobin destroying agents, ulceration of the stomach, of the round ulcer variety, would form after wounding the surface.

Futterer (*J. A. M. A.*, Vol. xxxviii. No. 4) resected areas of gastric mucous membrane from animals, removed blood by venesection directly after the operation, with the result that complete healing ensued after two weeks.

After repeated blood lettings, he produced conditions in the animal which led to the formation of the round ulcer. From the injection into the blood of animals of the hemoglobin destroying agent pyrogallol, Futterer produced ulcer of the stomach.

The theory of Virchow speaks for altered conditions of the blood as the basis of at least many cases of gastric ulcer. Gastric and duodenal ulcers, as has long been known, follow burns of the surface of the body. This as yet has not been satisfactorily explained. It appears more than probable that this is due to toxic substances developed in the blood or absorbed from the burnt area.

Heart disease, liver disease, and arterio sclerosis, are responsible for cases of ulcer of the stomach. In the cases seen at the Johns Hopkins Hospital by Osler in which, strikingly different from the Massachusetts General Hospital cases, the larger number occurred in men, and the larger number in men between the ages of forty and fifty years, it would be interesting to know to what extent arterio sclerosis, as an etiological factor, entered into these cases. We have not been able to find in the reports of the cases anything bearing upon this feature.

It has been shown that in the great majority of cases of gastric ulcer hyperacidity is present.

Leube recognized the increased hydrochloric acid content of the gastric juice, with coincident anaemic condition as an important etiological factor in the production of the disease.

Riegel believed the absence of increased amount of hydrochloric acid in the gastric juice in ulcer, exceptional. He believed, however, the hyperacidity to be neither the cause nor the effect of the ulcer, that injuries to the gastric mucous membrane, whether from trauma or from circulatory causes, led to the formation of ulcer only when hyperchlorhydria was present permitting of self-digestion of the membrane, whereas in the presence of gastric juice of normal constituents healing occurs rapidly.

Occasionally does it happen that in the employment of the stomach tube, small discs of mucous membrane are torn from the surface and ulcer does not follow.

Matthes, quoted by Riegel, found that mechanical injuries to the gastric mucous membrane even of large extent, healed rapidly, but that healing did not occur when he introduced daily into the stomach of the animal, a solution of hydrochloric acid. Mechanical injuries alone will not produce gastric ulcer.

A few years since, a so-called human ostrich made his appearance in Kansas City. For years he had given exhibitions of glass eating, of swallowing nails and knife blades. In an attempt to surpass himself, he swallowed a large barlow knife, which proved his undoing. He suffered considerably, entered the German Hospital, where he was operated upon by Dr. Von Quast. Two jackknives, five knife blades, about one hundred wire nails, and screws, besides carpet tacks, a wire staple and fragments of glass, were removed from

the stomach. Dr. Von Quast informs me that a careful search of the stretched and thinner stomach wall revealed not an ulcer.

That ulcer heals and is cured is shown by post-mortem observation. You will recall that Welch estimates that in Europe, open ulcer or cicatrices occur in five per cent. of persons dying from all causes, the ratio of cicatrices to ulcer three to one.

Cruveilhier, seventy-five years ago, recognized the characteristics of round ulcer—the chronicity and the tendency to recur. The tendency to recur must be the greater if the patient is allowed to return too early to the conditions and habits of living as when attacked. Surely impoverished conditions of the blood and hyperchlorhydria are at least great predisposing causes of gastric ulcer, and these conditions should be particularly treated. Certainly the condition hyperchlorhydria as a cause of gastric ulcer has not been given up. Musser (*J. A. M. A.*, May 5, 1906) in reporting a case of perforating ulcer of duodenum just beyond the pyloric ring, states: "It is true the hyperacidity from which he suffered was in all probability the cause of the ulcer, and this in turn might have been the product of a neurosis."

The method of treatment should be that which looks first and foremost to the improvement of the nutrition of the patient—the treatment which in the shortest period of time improves the quantity and quality of the blood, raising the resistance of the tissues of the body. For, from such a treatment may we expect rapid healing of the ulcer, which is all important; for we know the older the ulcer the more induration of the edges may we expect.

The treatment which for years has been generally employed, particularly after hemorrhage, is insistence upon absolute rest in bed, bodily rest and rest for the stomach. Rest for the stomach is secured by starvation for first days, later by following the plan urged by Cruveilhier in 1830, the absolute milk diet. Fleiner's plan largely followed is as follows:

The first few days after a hemorrhage nothing is given by the mouth but small fragments of ice to allay thirst and favor contraction of the stomach. To maintain nutrition of the body nutrient enemata are administered. After a few days small quantities of milk are given by the stomach, (Leube milk in small quantities from the first day. Ewald after three days) which for four weeks is very gradually increased in amount until not more than nine ounces are administered, every two or three hours. Then cooked rice, barley, arrow root are added and after six weeks the use of scraped meat is begun. Fleiner and Kussmaul have urged the use of large doses of bismuth subnitrate as an adjunct to the treatment.

These principles of treatment were accepted and have been generally employed. Until comparatively recently very little difference of opinion upon this method has been voiced.



If the prime consideration be the improvement of the quality of the blood and the improvement of the nutrition of the patient in the shortest possible time, it is well to carefully consider the merits and demerits of the plan of rectal feeding.

The use of such enemata is not unattended with perplexities and disappointments. In many cases they can be employed for a short time only, in other cases not at all, for the reason they prove irritating. The teaching in Rosenheim's clinic in Berlin is that nutrient enemata should not in any case of ulcer be exclusively employed for more than eight days.

In a careful study of the use of nutrient enemata Edsall of the Pepper Laboratory some years ago found that elimination was always in excess of absorption.

Osler (*Pract. Med.*) states, "While theoretically it is better to give the stomach complete rest by rectal feeding, yet in practice this strict limitation is not found satisfactory.

Prof. Lenhartz of Hamburg has urged the employment of a diet richer in albumin and more concentrated than the exclusive milk diet.

Theoretically a superabundance of hydrochloric acid in the gastric juice is fixed by proteid substances. Reigel has stated that the rational dietetic treatment of hyperchlorhydria is the use of albuminoids and declares it not proven that these substances increase hydrochloric acid production.

Boas (*Ernahrungs Therapie*, Leyden Vol. 11 p. 75.) states "experiments on dogs only are reported which suggest that the meat diet causes an increased and persistent superacidity. The advice however that the use of meat should be absolutely interdicted for those suffering with superacidity appears as yet not sufficiently well grounded."

Wagner (*Muenchener Med. Woch.*, 1904 No. 1) has reported the results of the treatment of sixty cases of ulcer in the service of Prof. Lenhartz, at Eppendorfer Krankenhaus by the Lenhartz method. In every case of this series was the history of hematemesis. Absolute rest in bed is enforced for in most cases four weeks. In cases of grave hemorrhage for the first two weeks, urine and stools are collected in bed. The patient made tranquil, disturbed as little as possible. An ice bag placed on the stomach lessens the tendency to distension and mitigates the suffering. On the day of the hemorrhage the patient receives iced milk by the spoonful, to the amount of 200 to 300 ccm. and with this, one, two or three fresh eggs in twenty-four hours, well beaten and iced. In addition two or three times a day subnitrate of bismuth suspended in water is given usually 2.0 gr. at dose. The bismuth is repeated throughout the next ten days as required.

In many cases vomiting and pain ceased at once; with very few exceptions, all vomiting and pain in from one to three days had

disappeared. The fixation of the excessive amount of hydrochloric acid is held to be the main reason for the prompt relief of symptoms. It is stated that latterly in Lenhartz's service some patients received iced egg by the spoonful a few hours after hemorrhage.

The quantity of food is daily increased by 100 ccm. of milk and six to eight eggs are taken. For the remainder of the period this amount of daily nourishment is continued. The amount of milk never increased above 1 L. per day.

In the plan of Lenhartz, the use of raw scraped beef is begun on the sixth day. For two or three days 35 g. are given in small portions in the twenty-four hours, the amount is then increased to 70 g. for the remainder of the period. After two weeks, thoroughly cooked rice and softened zwieback are permitted.

The use of iron is begun early and only as Bland's pills.

"Morphine or other drugs for the relief of pain were never required."

The features of this method of treatment are (a) stomach feeding (b) the employment of diet very rich in albumin (c) the large amount of food administered.

In a recent paper E. Wirsing (abs. *Muenchener Med. Woch.*, October, 1905) reports the results of forty-two cases of gastric ulcer treated in St. Hedwig's Hospital in Berlin, according to Lenhartz procedures. He concludes from the study of this series that in non-hemorrhagic cases the method has apparently advantages over the Leube method. In those cases with fresh hemorrhages the method gives more lasting results.

In many particulars the method of Lenhartz must appeal to us. It has been given us after some years of trial and after comparisons have been made in the Eppendorfer Hospital between this plan of treatment and the Leube-Ziemssen. Reports from the hospital speak decidedly in favor of the Lenhartz method.

When from irritability of the stomach, or when in particular cases, rectal feeding must be for a time employed, the better procedure is to cleanse the surface of the bowel by use of small quantities of warm water. After one hour the nutritive enema is introduced by means of soft rectal tube connected with a suitable funnel, the patient on left side with raised pelvis. No more than three enemata a day should be employed. Egg and water mixtures are not absorbed from the colon without the addition of sodium chloride.

The following mixture is recommended by Boas and is used by Ewald and Kuttner:

¼ L. Milk.

Yolk of two eggs.

1 teaspoonful salt

1 tablespoonful flour.

Add tablespoonful of wine.

Edsall has concluded from his own observation and from a study of the literature, that chronic continuous gastrosuccorhoea does exist and may lead to ulcer or gastrectasis.

Certain cases of ulcer are accompanied with hypersecretion and motor insufficiency. In the treatment of these cases systematic use of the stomach tube must be made, not more than  $\frac{1}{2}$  pint water used in washing

A difference of opinion exists as to the propriety of using the stomach tube, gastric ulcer present. Robin (*Internat. Clinics*. Vol. ii S. xii) does not approve of Fleiner procedure, nor the use of irrigations of nitrate of silver, for the reason that the tube is employed.

In the Cohnheim clinic is taught that the introduction of the tube into the stomach of any chlorotic woman is fraught with danger.

Kuttner assures us that in Ewald's clinic no case has been injured by the introduction of the tube. The older the ulcer the less the danger

Statistics show that, unlike fatal hemorrhage, perforation in gastric ulcer is more frequent in women than in men. In 139 cases of perforated ulcer in females, four-fifths occurred before the age of thirty-five. The average age at which perforation occurs in women is twenty-seven. In the men forty-two (Brinton from Welch.)

The direct medication of the ulcer is important. The measures employed look not only to the treatment of the ulcerated surface, but to associated conditions, notably gastric catarrh, and are to be used in cases of chronic ulcer.

The method of Fleiner is well known. Into the empty and cleansed stomach a quantity of Bismuth (10 g. or more) suspended in 200 cc. of water is introduced.

The patient changes positions of the body that the bismuth comes in contact with the entire stomach surface. The fluid from which the bismuth has been deposited is then removed.

The use of bismutose has been urged. The advantage claimed for this compound is that the percentage of proteid entering into its composition (21 per cent.) aids in fixing the hydrochloric acid. The compound is highly constipating. Nitrate of silver is largely employed, and by Boas is preferred to bismuth. His plan is to give a tablespoonful of a solution (0.2 in 120, increased to 0.3 in 120 and finally 0.4 in 120). This is given before meals and over a period of about two weeks.

Another plan is to irrigate the stomach with a solution of nitrate of silver. 300 to 500 cc. of a solution (1-2000 to 1-1000) is introduced into the cleansed stomach, allowed to remain there three minutes, then drawn off, after which the stomach is washed.



Treatment of predominating symptoms: The treatment of gastric hemorrhage has recently been considered by Ewald (abs. *Wiener Med. Woch.*, Mar. 1906.) He reviews the usual remedies employed. He has seen no benefit from the use of adrenalin; gelatine in generous quantities by the mouth, with and without iron chloride or fruit juice gave no result, neither did gelatine solution injected into rectum. He saw no benefit from calcium chloride solution and states Boas, as well, has no confidence in its use.

Ewald warmly recommended the following procedure which he employed in eight cases of hemorrhage extending over a number of days, after other procedures had proven unavailing.

The patient is given a small injection of morphine, the pharynx cocaineized (that retching may not ensue.)

The stomach tube is introduced and the stomach irrigated with ice cold water. The bleeding at once ceased. The tube is pushed a short distance beyond the cardia and only pushed further when the stomach is filled with water. The washing is continued until blood clots and other contents are washed out, the wash water coming away uncolored. To combat collapse, camphor and ether injections are employed, heat to extremities, and if required the blood volume increased by normal salt solution introduced into tissues of supraclavicular region.

For the treatment of stomach pain we have opium and belladonna. For relief of pain in gastric ulcer belladonna is the better. The weight of evidence supports the claim that opium increases the secretion of hydrochloric acid.

In Ewald's clinic it is taught that there is no healing so long as morphine is given.

The following mixture is of value in pain:

Chloroform .....	1.0
Bismuth subnit .....	15.0
Ag. dest. ....	150.0

Of this a tablespoonful is given every hour, the dose gradually diminished.

Belladonna may be used as follows:

Ext. belladon .....	0.2
Magnes ust. ....	15.0
Nat. bicarb .....	25.0

A teaspoonful of this powder should be given one to two hours after luncheon and dinner, bismuth subnitrate to be given in the morning.

Cohnheim is a warm advocate of the use of olive oil in spasm of the pylorus from ulcer. The oil is given in the morning on the empty stomach; if cramps are present, two or three times a day.

For inordinate thirst the following will be found beneficial:

Cocain .....	0.3
Aq. Amygdal. Amar.....	15.0

Ten drops to be given three times daily.

Mansell Moullin (*Lancet*, 4253) in explanation of the cause of pain in ulcer states that the abdomen opened under local anaesthesia, neither pinching nor cutting the stomach will give pain. Only the peritoneum is painful, and this in the highest degree. When the area involved by the ulceration attaches itself to the peritoneum or by bands of adhesion traction is made on the peritoneum by movements of the stomach, the pain which characterizes gastric ulcer is evidenced. He believes that this is the explanation of the pain occurring soon after taking food, and of the fact that the most painful ulcers are those situated on the most movable portion of the stomach, namely, under curvature and the pyloric region. Inflammation of the lymph vessels in the region of the ulcer is continued into the peritoneal lymph vessels and render the area toward the pylorus sensitive.

The lymph vessels converge toward the pylorus while the cardia is relatively poor in lymph vessels. This is the reason for less tenderness in the cardiac end.

Constipation in gastric ulcer is to be avoided, as constipation tends to increase the acidity of the stomach secretions.

The treatment followed in Ewald's clinic is as follows:

Regulate the bowel movement in the first days by the use of warm water irrigations. Later give every morning  $\frac{1}{4}$  liter Carlsbad water, barely warm—never hot.

The patient should have not more than two movements daily. Vichy water is at times better tolerated. Vichy Hospital is preferred.

Artificial Carlsbad water can be made from artificial Carlsbad salts of the German Pharmacopoea as follow:

Sod. Sulph Exsic.....	44
Pot. Sulph .....	2
Sod. Chlor. ....	18
Sod. Bicarb. ....	36

Six drams of this salt to one liter of water.

More frequently, perhaps, is the following used:

Sod. Sulph .....	50
Sod. Bicarb. ....	6
Sod. Chlor. ....	3

Dose: One teaspoonful.

The return to the full diet should be gradual and the patient carefully instructed in the dietary.

After eating the patient should rest in bed for a time, all clothing loosened. The patient should at no time wear corsets; only loosely fitting clothing should be worn.

A towel dipped in warm water placed over the stomach covered with impervious material, then a flannel bandage will prove very useful.

In the Augusta Hospital recourse is had to the following procedure: The skin of the abdomen is thoroughly cleansed and rubbed with vaseline; over this is placed a layer of cloth and then a hot linseed poultice applied. These hot poultices are continued for twelve to fourteen days. The purpose of the thorough cleansing and vaseline is to prevent the formation of heat vesicles which may become pustular, leaving pigmentation. These poultices have a good influence over pain.

When there is tendency to hemorrhage or history of recent hemorrhage, the ice bag is used. Hot poultices should not be employed until three months from date of last hemorrhage.

The articles of food permitted must meet the following requirements: 1. Easily dissolved by the gastric juice. 2. Use does not hinder nor abnormally increase peristalsis. 3. The mucous membrane be not chemically, thermically nor mechanically irritated. 4. Easily taken up by intestine and appropriated.

When one considers that of the entire digestive process, the only voluntary act is that performed in the mouth, it is surprising that we so often fail to urge upon our patients, careful and systematic mastication.

The treatment of digestive disorders should begin in the mouth. By the act of chewing more is accomplished than the trituration of food, the regulation and intimate admixture of the same with saliva. Pawlow has shown the marvelous influence of taste and palatability of food upon the stomach secretion and this influence is intensified by deliberate chewing. It is certain that by systematic chewing a greater amount of energy, from a given amount of food, is derived, the procedure lightening the work of the stomach as well.

In the clinical sense an ulcer of the stomach may be regarded as healed when vomiting, pain and sense of pressure after eating has disappeared, the patient free from discomfort. The weight of the body increased to the average weight of individuals of the same height, and the composition of the blood approximately normal.

I wish finally to submit the following recent statistics bearing upon the curability of gastric ulcer by medicinal treatment:

Russell, of Birmingham General Hospital (*Lancet*, No. 4196), followed the after history of cases of ulcer which had been treated in the wards of that Hospital from 1892 to 1899.

In the eighty-nine cases treated in this period the after histories of forty-seven cases were obtained.

The direct mortality from the disease amounted to 2.1 per cent. 42.6 per cent. ended in recovery. Sixty-four per cent could not at the



time of the report be classified as they seemed on the border line between recovery and continuance, and might fall into either class. The length of time over which these cases extended from first hematemesis to last report is as follows:

1-3 years	12 cases
3-4 years	5 cases
4-5 years	9 cases.
5-6 years	7 cases.
6-7 years	3 cases.
7-8 years	2 cases.
8-9 years	1 case.
9-10 years	3 cases.
10-11 years	2 cases
12-13 years	3 cases.

Russell states that in 6040 deaths in the Workhouse Infirmary at Birmingham from 1892 to 1901 only two were attributed to gastric ulcer. "There were of course other deaths from peritonitis and it is possible and probable that some of these may have been due to perforation of a gastric ulcer. Post-mortem examinations had not been made, but it seems clear at all events that gastric ulcer is not a frequent cause of death in the institution, and the net results of my inquiries are to show that apart from first attacks the disorder is one with but a small mortality."

Schultz of Breslau (abs. *Wiener Klin Woch.*, Dec., 1903) studied the record of 291 cases, observed in Breslau and Hamburg with the view of determining the permanency of cure of gastric ulcer by medical treatment. The subsequent histories of 157 cases could be followed.

In 64 per cent. treated, according to the Ziemmissen-Leube principles, cure resulted. In 18 per cent. of the cases treatment did not prevent recurrence, but a greater part of these were eventually cured, while 10.4 per cent. continued to suffer. The direct mortality was 7.6 per cent.

## ABDOMINAL INJURIES.\*

BY H. C. DALTON, M. D., ST. LOUIS.

It would take us too far afield to discuss all the injuries of the abdomen in one paper. I have, therefore, left out of view injuries to the abdomen due to stab and gun shot wounds.

There is not a chapter in the realm of abdominal surgery that is more deserving of thorough, painstaking consideration and study than is that devoted to abdominal injuries.

The elementary state of our knowledge concerning the early clinical manifestations of serious visceral injury is *prima facie* evidence of the fact that the subject has not been accorded sufficient attention.

Experience continues to emphasize the contention that every abdominal injury, no matter how trivial it may at first appear, must be regarded as of very serious import until it proves otherwise.

Whenever an individual has received an abdominal injury, whether it is a contusion, a stab, or a gun shot wound, the one appealing and important question which presents itself to the experienced medical attendant is: "Is there a serious abdominal lesion?" This is, indeed, a very perplexing question, since an apparently insignificant blow may cause very grave visceral injury; and since a really trivial extra-abdominal lesion may cause symptoms closely simulating the early clinical manifestations of intra-abdominal rupture. It is also a fact that very grave visceral injury may cause no immediately prominent or guiding symptoms. Perhaps a more systematic and painstaking study will enable the trained attendant to more frequently correctly read the presented picture.

Owing to the fact that the consensus of opinion agrees that, with the exception of hematuria pointing to some injury of the urinary tract; rectal bleeding guiding us to the mesentery or lower portion of the intestinal tract; and hematemesis indicating a gastric or upper intestinal tract lesion, there is absolutely no symptom, or group of symptoms which clearly indicates a penetrating wound of the abdominal viscera, and since every experienced physician concurs in the contention that the only safe and proper course to pursue is to immediately explore the wound, whether it be stab or gun shot, to its depth, thereby enabling the trained eye, and the examining finger to know whether or not a lesion exists, an abdominal contusion should always be considered seriously, and carefully watched. It is very necessary that we obtain a careful and complete history of the accident. We must find out just how the accident occurred; the char-

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\*Read at the annual meeting, Jefferson City, May, 1906.

acter of the force, the site of the impact; the condition of the patient, at the time of the accident; the immediate effects of the accident, as evidenced by the patient's ability to assume his vocation, etc., and the early clinical signs presented at the time of our visit must be carefully studied.

*Character of the Force:* This is very important. It is true a trivial blow may cause grave intra-abdominal trouble, so much depends upon existing conditions. It has been found that if the force be circumscribed and of high velocity, such as the kick of a horse, or a sudden severe punch with the fist, visceral rupture is very apt to occur. In fact Clevasse collected 36 cases of horse kicks of the abdomen in 35 of which intestinal rupture occurred. When the force is diffused, as in a slowly moving ponderous object, such as a carriage or wagon wheel over the abdomen, it is more than probable that either a solid organ will be fractured or a hollow viscus lacerated. Very frequently the bowel will be completely severed. Division occurs most often in the region of the duodeno-jejunal flexure. Very recently I operated upon such a case; a young boy, 12 years of age, was run over by a loaded wagon. As the boy suffered but little during the first day his medical attendant didn't consider the case a grave one. I was called on the third day. The patient was then suffering considerable pain, the pulse was 120, temperature 102; the abdomen tympanitic. Assisted by Drs. Roland Hill, A. E. Babler, and Samuel J. Baker, I opened the abdomen in the left linea semilunaris. I chose this site because a contusion was noted at this point. The small intestine was found completely severed down to the mesentery. Fecal matter was everywhere in evidence. This was sponged out very carefully, and the intestine closed by the Murphy button. The operation consumed but 30 minutes. The boy did not rally from the shock, and died three hours after the operation.

Had the operation been performed the first day of the injury I am persuaded recovery would have followed. I recall three other cases of rupture of the intestine due to blows upon which I operated while in charge of the St. Louis City Hospital. All recovered, but they were operated upon in a *few hours* after the injury.

Makin has found that 70 per cent. of intestinal ruptures are due to sudden, sharp blows. Crushing of the pelvis frequently causes intraperitoneal rupture of the bladder; a fall from a height may cause rupture of any of the abdominal viscera.

*Site of Impact:* It must be admitted that the site of impact does not always guide us to the seat of the trouble. It is also true that the external evidences of injury are not reliable criteria of the severity of the lesion.

I recall a case of this kind upon which I operated at the St. Louis City Hospital in the presence of Drs. L. I. Matthews of Joplin, and



Pinkney French of St. Louis, in which the external injury was scarcely noticeable, and yet a lacerated intestine was found. The operation was done two hours after the injury, the patient recovering without an untoward symptom, the recovery no doubt being due to the promptness of the operation before peritonitis had a chance to develop.

Anatomically the abdominal walls are thinner above the umbilicus, and offer less resistance than below that point, yet almost all of my cases of rupture of the bowel have been in the lower abdomen. Very recently Vaughan has recorded a case of left sided rupture of the diaphragm due to a blow upon the back. Senn reports a case of rupture of the intestine due to the patient slipping, striking the ground on his buttock. Smith reported two cases of rupture following a blow upon the back. A fall from a height may cause fracture of liver, mesenteric rupture, visceral laceration, etc.

In many instances the site of impact may enable us to clear up the diagnosis. When a blow in the right hypochondrium is followed by shock of a persistent character, signs of anemia, etc., we, of course, suspect hepatic rupture. When symptoms of urinary distress follow a blow upon the lumbar or hypogastric region, we direct our attention to the urinary tract. It seems needless to comment further.

The point I desire to emphasize is that an intra-abdominal rupture may follow a blow upon some part of the body other than the abdominal parietes. We should be guided by the presented picture in general.

*Condition of the patient at the time of the Accident:* By this I refer to the general health of the patient; the position and the expectedness of the blow, as well as the presence or absence of a hernia, abdominal tumor; the degree of distension of the hollow viscera, and the thickness of the abdominal wall.

The general condition of the patient at the time of the accident is of great importance. It is obvious that an enlarged, friable spleen or liver, a distended stomach or bladder, the presence of an inguinal or femoral hernia, the existence of an abdominal tumor, the thickness of the abdominal wall, as well as the expectedness of the blow, are all important factors. When a person expects a blow he naturally contracts his abdominal muscles, thereby rendering an otherwise dangerous blow of little moment. Treves states that the thickness of the bed of fat is much to be considered in arriving at a proper conclusion. The position of the patient at the time of the accident should also be taken into account.

*Immediate effects of the accident:* The severity and duration of the symptoms are variable. The immediate effects may be transient even though a visceral injury has occurred.

Mr. Burrows has reported a case of complete severance of the small intestine due to the passage of a carriage wheel over the abdomen. The patient walked half a mile to his home without special discomfort.

In many cases the patient considers the injury as of but passing moment until the appearance of abdominal pain, vomiting, or other pressing symptoms supervene. It is not uncommon to find a patient who has suffered severe abdominal injury who states that he has resumed his vocation shortly after the accident. The severity of the early symptoms depend quite materially upon the character of the intra-abdominal injury, the severity of the internal hemorrhage, the character and quantity of the escaped contents, and the amount of the self control possessed by the patient.

Very recently a critic has shown that "the more abundant and specialized the nerve supply of the part the more it will contribute to the production of shock when subjected to injury."

Initial shock is practically always present; its severity and duration are no reliable criteria of the extent of intra-abdominal injury. Experience has demonstrated that the degree of shock following a visceral rupture may not be more severe than would be expected from a superficial (extra-abdominal) injury. An accompanying hemorrhage will intensify, and, at times, especially if severe, prolong the initial shock; if the hemorrhage be continuous, the patient will, as a rule, present the clinical manifestations of internal hemorrhage—progressive acute anaemia, rapid small pulse, restlessness, air hunger, thirst, cold perspiration, and death. Persistent shock is always significant of grave danger.

Perhaps the most prominent symptom and the one to which attention is most frequently called, is pain. It may be the only early symptom complained of by the patient. McCosh and others have reported cases of mesenteric injury in which pain was a late symptom. In McCosh's case the patient, a lad of 10 fell from a fifth story window to the ground, alighting across the abdomen on an iron bar. Pain was absent for 36 hours, although signs of internal hemorrhage appeared shortly after the accident. At the operation McCosh found a large blood clot between the layers of the mesentery, while a portion of the intestine was gangrenous. Pain occurring hours or days after the passing of the initial shock may signify either perforation, mesenteric injury, or developing peritonitis. The pain may be continuous or colicky in character. It may be very severe. The ability of the patient to stand pain must be duly considered. In intestinal rupture, especially where there has been free peritoneal soiling, the pain is quite severe and often referred to the umbilical region. When the kidney has been lacerated or the ureter or bladder ruptured, the pain is referred to the course of the ureter, or perhaps

complained of in the thigh, testical, or lower hypogastric region; the testicle may be retracted, and painful to palpation (in rupture of the bladder the pain may be especially severe in the penis, or in the lower sacral area.) In splenic or hepatic fracture, pain may or may not be very severe, much depends on the character and severity of the fracture.

A very valuable diagnostic sign of intra-abdominal injury is *Muscular Rigidity*. Gentle, systematic palpation will most frequently enable the attending physician to detect its presence. According to Le Conte the rigidity which is characteristic of visceral injury is progressive in character, and when once developed is of board-like hardness, and uninfluenced by palpation. A gradually developing rigidity is often significant of peritonitis.

Mr. Knaggs believes that late vomiting is of much import. He contends that vomiting, appearing after the patient has apparently rallied from the immediate effects of the accident would justify an exploratory operation.

Persistent vomiting is of great diagnostic value. Hematemesis should guide us to the stomach and upper intestinal tract. In increasing pulse rate is ominous, and should always cause apprehension. Fowler attached great importance to its presence. He contends that a gain of 10 to 15 beats an hour is significant of intra-abdominal rupture. A rapid small pulse, after the passage of the initial shock, is of decided import.

*Facial Expression* tells volumes,—too often we overlook its significance. The *facies abdominalis* is often a late sign of progressive peritonitis. This expression, when once seen, can scarcely be forgotten.

Neither localized tenderness, diminished liver dullness, changeable dullness, nor other signs, e. g. retroperitoneal emphysema, will be discussed, since their significance, when present, is quite well known. The absence of peristalsis in intestinal rupture is worthy of mention. D'Arcy Powers called attention to the fact that in duodenal perforation neither gas nor feces passed per rectum. The presence of blood in the rectum, as evidenced by rectal palpation, would point to an injury to the mesentery or lower intestinal tract.

Campbell bases his diagnosis of rupture of the intestine mainly on the severe initial pain and muscular rigidity.

Makin considers it a constant sign, Brewer asserts that deep seated localized pain, following an addominal contusion, especially if increased by pressure and accompanied by local or general rigidity, is one of the most constant symptoms of visceral injury.

He contends that the presence of deep seated pain, localized tenderness, and muscular rigidity, occurring shortly after the accident, warrants operation. Hartman believes that rigidity is an imperative



indication for laparotomy even though other signs are absent. Le Conte does not concur with Brewer, he prefers to wait for more definite symptoms. Personally I cannot but feel that the "waiting for development policy" is wrong, and strongly to be condemned. The character of the force, the shock, the pain, the muscular rigidity, the localized tenderness, the facial expression, the pulse, and the picture in general should guide us correctly. In truth, the simple fact that a patient who has been recently kicked by a horse, or run over by a carriage or a wagon, etc., complains of severe abdominal pain, and when the examining hand detects deep seated tenderness and muscular rigidity, should suffice to cause us to do an exploratory laparotomy. The characteristics of pleenic fracture are the site of the impact, the severe persistent pain in the left hypochondrium, the muscular rigidity, and the signs of internal hemorrhage. The same remarks, of course, apply to hepatic rupture, save, of course, the location.

*Nausea:* With or without vomiting is one of the conspicuous features of renal laceration. In vesical rupture, the urgent desire is to urinate and the inability to do so, the findings revealed by the catheter, should point to the ruptured site.

It is worthy of note that the passage of blood clots from the kidney may cause severe paroxysmal pain along the course of the ureter, and in the genitals. Cystoscopic examination of the bladder may tend to clear up the diagnosis.

Uncomplicated injuries of the pancreas are very rare. There are no characteristic manifestations to guide us. Robson has reported a case of acute hemorrhagic pancreatitis due to abdominal contusion. Injuries of the thoracic duct are exceedingly rare, and baffle all attempts at diagnosis.

The prognosis of visceral injury is, of course, grave. Statistics indicate that one out of every three of such cases die unless promptly operated upon.

Makin believes that rupture of the small intestine is more dangerous than a similar lesion of the large bowel, since the small bowel is more movable, and the fluid contents will pass out more readily and infect the peritoneal cavity. Early diagnosis and prompt surgical intervention offer the best results. Hence the prognosis may be condensed in a few words: *It depends upon the time and character of the treatment.*

In 1890 I reported in the *Weekly Medical Review* an interesting case of rupture of the liver and kidney caused by a man falling from the fifth to the third floor of a building, striking upon an iron bar. The bar struck him over the right lumbar region. Great nausea and faintness followed, but he did not vomit or lose consciousness. When admitted to the City Hospital an hour after the injury, the tempera-

ture was 100 degrees F., pulse 84, respiration 38. Pressure over right lumbar and hypochondriac regions gave considerable pain. There was no abrasion or contusion at the site of the injury. The urine was drawn and found bloody. Percussion gave dullness over the right lumbar region as high up as the axillary line. As there was hematuria I thought its source most likely renal. The patient's condition was so good that I did not deem an operation advisable. He was given an opiate, and an ice bag applied to the right lumbar region. At 10 A. M. next day, 19½ hours after the injury, the temperature was 102.2, pulse 110, respiration 48. The abdomen was greatly distended, and tender to pressure. Percussion gave dullness (flatness) over both sides of the abdomen, extending well up toward the median line. The hematuria continued. Believing that the hemorrhage was due to a ruptured liver, I opened the abdomen and found it full of clotted and fluid blood which was washed out with normal salt solution. Underneath the liver, near its outer portion, a rent about 3 inches in length was discovered which bled freely on manipulation. This was packed tightly with gauze. The patient recovered.

The first recorded operation for intestinal rupture was performed in 1883 by Bouilly. Craft of England was the first to perform colotomy in case of intestinal rupture. The patient died following the secondary operation. Moty, in 1889, performed the first successful operation for intestinal rupture. It seems needless to discuss the operative technique since the surgeon must be guided by the conditions found at the time of operation. In passing, I would like to call attention to the exaggerated Fowler posture; it is certainly of very great benefit in these intestinal cases where there has been free soiling of the peritoneal cavity. In closing, I want to emphasize the fact that every abdominal contusion, no matter *how insignificant* it may at first appear, demands prompt, painstaking consideration. In many instances the character of the injury, combined with a careful study of the presented picture are quite sufficient to guide us. The practitioner who waits for confirmatory signs of visceral rupture will wait in vain for a successful outcome.

#### DISCUSSION.

Dr. J. D. Griffith, of Kansas City: I want to thank the doctor for his most admirable and interesting paper. Gun-shot wounds of the abdomen have been particularly interesting to me. I was hoping that he would say something more on this subject but he cut it short. He has had a large amount of experience in the surgery of gun-shot wounds and could undoubtedly have given us much valuable information. As he has had experience also with the wounds produced by the two forms of weapons used, he could have given us some valuable information on that point. The two weapons which are used, are those we call the pistol, which discharges a leaden bullet, and the one used by the military branch of the Government, which carries a missile coated by a hard material, either nickel steel or copper steel. The difference in the

action of the two is so marked, that I was hoping he would call attention to it. We know that when fired at close range the leaden bullet tears and carries everything before it. The difference in a hard bullet is so marked that I want to call attention to a little experience I had during the late Russo-Japanese war. While there I had the pleasure of visiting a hospital in Tokio with 840 beds, and another hospital with 18,200 beds, and saw train loads of patients come in from Liaoyang, requiring practically eight days to get there from the front. Very frequently those men suffering from gun-shot wounds had never had the dressing changed, which was applied on the field. These bullets when they penetrate the abdomen, either kill at once, or do not leave conditions from which the patient will not recover. Those which gave indications that the injury was such that they might not recover, the Surgeon General told me, were taken to the first aid station for the purpose of stopping the flow of blood. Of course, these were cases where there was evidence of injury to the blood vessels; otherwise, they were just dressed and went back to the general hospitals in Japan. You would be surprised at the number of these wounds resulting from field pieces of from .30 and .31 calibre guns, but the innocence of the wounds under this "let alone treatment" was somewhat remarkable. I saw x-ray after x-ray taken with the bullet in and no bleeding. Of course, you may say the results were remarkable and they were, but let me ask you to give the surgeons of the armies on the field a great deal of credit. The war was fought as much by the surgeon as it was by the soldier. He was thoroughly organized to put his troops in the field ready for action. It was the order that when it was known that they were going into action every man should go to his quarters and change his under-clothes. This applied to the men in the navy. It was the order in the army that when they stopped, the men should take a bath. I think it was due to this remarkable cleanliness that they recovered. Just to give you an idea of the conditions, I will state that I counted fifteen gun-shot wounds in one man from his pelvis to his neck, eight wounds in front and seven behind. He was just eight days from the battle-field. It seems that he got his wounds in front while fighting and after he got down, everybody passing gave him a jab. I examined him and found him tender over the abdomen. I asked him what he was going to do and he said that he was going right back to the front,—that he wanted to "get even." The lacerations produced by this bullet are more even at a distance of 1,000 yards and if it is much beyond that the laceration becomes nil. When there was an injury to the blood vessel, there was a clean cut. When not badly shot or giving evidence of hemorrhage, they let the patient alone. The let alone treatment was the most remarkable thing I saw.

I do not know that I could improve any on what Dr. Dalton has suggested. I am a firm advocate of early operations when symptoms demand it. It is very interesting in the consideration of contused wounds of the abdomen to consider the shell injuries. In one vessel, the flag-ship, there were 640 men in active work at the guns during the fight in the Sea of Japan. It is astonishing to find out how many pieces of shell struck this flag-ship of Togo's and injured the men without serious laceration. They had a space on the main deck where the wounded were lying, and the pieces of shell were falling so thick that the hospital surgeon said that he simply had to rig up something. He said he did not know anything else to do so he took a number of large bamboo pieces and hung them around on the spaces on the main deck, in this space about 15 feet square. The shells or pieces of shells striking these bamboo pieces, seemed to render the patients immune from further injury. It was like shooting a bullet against a silk handkerchief. He gave a history of three cases of spent pieces of shell that struck the abdomen. In these three cases there



was hemorrhage. The hemorrhage was rather peculiar in that the painful hemorrhage occurred in two in which it was parietal peritoneal hemorrhage. It called back to my attention the fact that in two of my operations, which I did without an anesthetic, I found that the patient only suffered when I handled the parietal peritoneum posteriorly or anteriorly. My patients never said a word except when I came to touch the parietal peritoneum. The hemorrhage in these cases was not large, where the wound was from contusions. It is surprising how low the mortality was. All the dressing was done during the engagement. In cases of abdominal injury where the shock lasts over six hours, it is my idea to go into the abdomen whether there is pain or not. The experience I had in observing these cases in the Japanese hospitals has certainly been of value to me and I think we can all get valuable lessons from their work.

Dr. C. G. Geiger, of St. Joseph: The doctor gave us a very excellent paper and left very little unsaid. I think it was a step in the right direction and if the doctors in general would practice what he has advocated we would have fewer deaths from abdominal conditions or injuries to the viscera. However, he did not go quite far enough and make plain enough certain important points as to the handling and the technic. I agree with Dr. Dalton and Dr. Griffith that too much time should not be lost in awaiting favorable terminations. Where we have shock with pain lasting a short time, say a few hours, it means that the vital parts have been injured, and a clean and timely operation will not kill, even though we make a mistake and find no injury. It is a well known fact that rupture of the hollow viscera is a dangerous condition but rupture of the solid viscera is not so serious. The great danger of course, is from peritonitis. If we wait for peritonitis we have waited too long. If we are capable of making a reasonably accurate diagnosis we can also, to a large extent, locate the site of injury and make our opening to correspond with it so as to handle the parts and interfere with as small an area as possible. Another thing is the method of dealing with the injury. It is a common practice to wash out the entire cavity. I believe the less we handle or wash the parts the better. It is always a good plan to drain in such cases and to not close the abdomen tightly, and to place gauze into the wound and leave the patient in position to favor drainage. He spoke correctly so far as the Fowler position is concerned. If we had an entry in the upper part of the abdomen, I would deprecate the use of this position. I want to say again and to emphasize that it is my opinion that the less we handle and the less we interfere with these wounds, the better it is for our patients, unless we have an injury to the viscera.

Dr. O. B. Campbell, of St. Joseph: I think the paper is timely, and it impresses two essential points right forcibly. (1). That the diagnosis of the extent of injury done the viscera and blood vessels in injuries of the abdomen is often difficult. (2). The value of early operation in this class of cases. It is often possible in injuries of the abdomen to exclude hemorrhage, but it is often impossible to determine the amount of injury to the abdominal viscera. In cases where there is really doubt as to whether or not rupture has occurred in the intestine, after waiting a few hours for the subsidence of shock, an exploratory incision should be made. The report of Dr. Griffith's experience in Japan is quite interesting, but until a full report is obtained it will probably not influence surgical procedures in this class of cases.

When a ball penetrates the abdomen and there is evidence of shock and hemorrhage, the established practice is to open the abdomen and repair as much as possible the damage done and within as short a time after the reception of the injury as is possible. I take the position that in non-penetrat-

ing injuries to the abdomen it is often impossible to make a diagnosis of the extent of the probable injury to viscera. A case in point: In one of the packing houses of St. Joseph a laborer was struck just below the ensiform cartilage by a moving handcar. He was taken home and the family physician called. On the following day, twelve hours after the reception of the injury, I was called in consultation. His temperature was 100 degrees, pulse 100. His upper abdomen was considerably distended and he complained of severe pain on pressure. I advised an exploratory operation which was refused. He died at the end of ten days and post mortem examination showed gangrene of the transverse colon due to a thrombus in the mesenteric artery.

Dr. W. U. Kennedy, of St. Louis: There seem to be two propositions that demand consideration. The first is that all conditions of the abdomen should be regarded as serious until they have proven not serious. Second, the amount of traumatism inflicted upon the abdominal wall is not a guide to the amount of injury, or of the character of injury within the abdominal cavity. There is one symptom that I would point out. If they suffer with a practically continuous pain in the abdomen, associated with constant nausea and the symptoms become severe, we may come to the conclusion that some of the hollow organs have been injured. The pre-eminent symptom from the time of the injury is the constant nausea. In a case coming under observation where this condition prevailed a diagnosis of obstruction was made and when the abdomen was opened it was found that the adhesions covered practically all of the intestines. Another case was that of an old lady who slipped and struck the abdomen on the side of the wash-tub. Apparently she had suffered no ill therefrom. Some six or eight weeks thereafter she developed pain throughout the entire abdominal cavity and developed this nausea; the condition became so severe that a diagnosis of obstruction was made and confirmed by laparotomy. I want to emphasize this point particularly, that when following a blow or other injury to the abdomen, there later develops abdominal pain accompanied by constant nausea, an exploratory incision should be made.

Dr. Dalton, in closing: I want to state to Dr. Griffith that formerly I waited 24 hours, but I do not do that now. I operate at once. It is not every injury that requires a laparotomy. I hope my paper will do some good in showing the necessity of operating in all cases early, and not to wait until it is too late to save our patients. I am quite sure that even should a mistake be made (the abdomen opened and no visceral injury found) the mere operation will not lessen the patient's chances for recovery. On the other hand should we withhold an exploration when one is needed we will almost surely lose our patient. In other words, when in doubt, operate. By so doing you will save many more patients than by vacillation and procrastination.

THE COLLECTION OF HUMAN EMBRYOS IN THE ANATOMICAL LABORATORY OF THE UNIVERSITY OF MISSOURI.

BY C. M. JACKSON, M. D., COLUMBIA, MO.

During the past five years a systematic effort has been made in the Anatomical Laboratory of the University of Missouri to form a collection of human embryos and foetuses of all ages for purposes of scientific investigation. I desire to call the attention of the medical profession to this collection for two reasons.

In the first place, the use of the collection for embryological research is not limited to students in the University, but is open to any properly qualified investigator. Physicians, therefore, who desire embryological material for research work in normal or pathological embryology are welcome to use the collection. It is not even necessary, in all cases, to visit the University for this purpose; for, under certain restrictions, suitable specimens may be loaned to responsible persons for study.

In the second place, I desire to take this opportunity to thank the physicians who have so generously co-operated in forming this collection by donating the specimens at their disposal. Not every physician in active practice is able to engage in scientific investigation, but all may aid the progress of research work in human embryology by contributing the material which they, and they only, can furnish. It is hoped that in this way the collection will rapidly increase in size and value.

To those who may desire to add specimens to the collection, a few suggestions may be advisable as to the best methods of preservation. In general, it may be said that embryos and foetuses of the first four months should be placed, as soon as possible, in a 10 per cent. formalin solution (1 part of commercial formalin to 9 parts of water.) If the membranes are intact, they should be carefully punctured so as to allow the amniotic fluid to escape. In case formalin is not available, the strongest alcohol may be used. The specimens should be placed in a bottle or jar completely filled with the fluid. Foetuses of over four months may simply be wrapped in cotton or cloths wet with formalin or alcohol, then packed carefully in a wooden box, and shipped at once by express. Transportation charges will be paid gladly by the laboratory. *In all cases physicians are earnestly requested to send as full a clinical history as possible.* This will add materially to the value of the specimen.

For purposes of reference, a brief catalogue of the specimens now in the collection is given. More detailed information is contained in



the complete catalogue kept in the laboratory. It will be observed that the scope of the collection is somewhat wider than usual, the aim being to provide material for the study of all prenatal stages. Many of the later fetuses have been cut into gross sections, or specially dissected to illustrate developmental topography. Several of the earlier specimens, and a few of the later, have been embedded and cut into serial sections for microscopic study.

#### CATALOGUE OF THE COLLECTION.

The following abbreviations are used: ♂, male; ♀, female; tot., total length; CR., Crown-rump length; form., formalin preservation; alc., alcoholic; intravasc., intravascular; topogr., topographic; thor., thoracic; abd., abdominal.

The source of each specimen is indicated by the name appended.

1. ♂ 48 cm. (tot). Intravasc. form. Sagittal sections (gross). Charite-Krankenhaus, Berlin.
3. ♂ 42 cm. (tot). Intravasc. form. Sagittal sections (gross). Charite-Krankenhaus, Berlin.
4. ♀ 38 cm. (tot). Intravasc. form. Sagittal and coronal sections (gross). Charite-Krankenhaus, Berlin.
5. ♂ 30 cm. (tot). Form. Sagittal sections (gross). Charite-Krankenhaus, Berlin.
6. ♀ 30 cm. (tot). Form. Sagittal sections (gross). Charite-Krankenhaus, Berlin.
7. ♀ 32 cm. (tot). Intravasc. form. Topogr. dissection of abd. viscera. Charite-Krankenhaus, Berlin.
8. ♂ 32 cm. (tot). Intravasc. form. Topogr. dissection of abd. viscera. Charite-Krankenhaus, Berlin.
9. ♂ 50 cm. (tot). Form. Topogr. dissection of abd. viscera. Charite-Krankenhaus, Berlin.
10. ♂ 46 cm. (tot). Twin. Intravasc. form. Sagittal sections (gross). Charite-Krankenhaus, Berlin.
11. ♀ 40 cm. (tot). Intravasc. form.-alcohol. Sagittal sections (gross). Prof. W. Waldeyer, Berlin.
12. ♂ 53 cm. (tot). Lived 11 days. Intravasc. form. (stomach and intestines artificially distended). Sagittal sections (gross). Charite-Krankenhaus, Berlin.
13. ♀ 40 cm. (tot). Intravasc. form. Topogr. dissection of abd. viscera. Charite-Krankenhaus, Berlin.
14. ♂ 47 cm. (tot). Intravasc. form. Topogr. dissection of thor. and abd. viscera. Charite-Krankenhaus, Berlin.
15. ♂ 26 cm. (tot). Intravasc. form. Sagittal sections (gross). Charite-Krankenhaus, Berlin.
16. ♂ 44 cm. (tot). Intravasc. carbolic-alc.-form. mixture. Topogr. dissection of abd. viscera. Prof. Olshausen's Frauenklinik, Berlin.
17. ♂ 52 cm. (tot). Intravasc. form. Topogr. dissection of abd. viscera. Prof. Olshausen's Frauenklinik, Berlin.
18. ♂ 33 cm. (tot). Twin to No. 19, umbilical cords and placenta intact. Intravasc. form. Charite-Krankenhaus, Berlin.
19. ♀ 33 cm. (tot). (see No. 18). Intravasc. form. Charite-Krankenhaus, Berlin.
20. ♂ 40 cm. (tot). Intravasc. form. Cross sections (gross). Prof. Olshausen's Frauenklinik, Berlin.
21. ♀ 48 cm. (tot). Intravasc. form. (stomach distended artificially). Topogr. dissection of abd. viscera. Prof. Olshausen's Frauenklinik, Berlin.

22. ♀ 36 cm. (tot). Intravase. carbolic-alc.-glycerine mixture. Cross sections (gross). Charite-Krankenhaus, Berlin.
24. ♂ 28 cm. (tot). Form. Topogr. dissection of abd. viscera. Charite-Krankenhaus, Berlin.
25. ♀ 30 cm. (tot). Form. Topogr. dissection of abd. viscera. Charite-Krankenhaus, Berlin.
26. ♀ 22 cm. (tot). Intravase. form. Topogr. dissection of abd. viscera. Charite-Krankenhaus, Berlin.
27. ♂ 46 cm. (tot). Intravase. form. (stomach artificially distended). Topogr. dissection of abd. viscera. Charite-Krankenhaus, Berlin.
30. ♂ 19 cm. (tot). Form. Topogr. dissection of abd. viscera. Charite-Krankenhaus, Berlin.
32. ♂ 50 cm. (tot). Intravase. form. Cross sections (gross). Dr. Thornton, Columbia, Mo.
33. ♀ 12 cm. (CR). Form. Topogr. dissection of central nervous system and abd. viscera. Dr. McAlester, Columbia, Mo.
34. ♂ 19 cm. (CR). Form. Topogr. dissection of abd. viscera. Dr. McAlester, Columbia, Mo.
35. ♂ 5.5 cm. (CR). Alc.-form. Topogr. dissection of abd. viscera. Dr. Graham, Columbia, Mo.
36. Viscera from No. 71. Form.
37. Viscera from No. 72. Form.
38. Kidneys, suprarenals and pelvic viscera from No. 75. Form.
39. ♀ 15 cm. (CR). Form. Topogr. dissection of abd. viscera.
40. ♂ 24 cm. (tot). Alc. Topogr. dissection of abd. viscera. Dr. McCallister, Centralia, Mo.
41. Abd. viscera from No. 74. Form.
42. Pelvic viscera from No. 76. Alc.-form.
43. Thor. and abd. viscera from No. 65. Alc.-form.
44. Thor. and abd. viscera from No. 70. Form.
46. ♂ 46 cm. (tot). Twin. Intravase. form. Topogr. dissection of abd. viscera. Dr. Myer, Columbia, Mo.
47. ♀ 40 cm. (tot). Alc. Abd. viscera dissected.
48. ♂ 42 cm. (tot). Intravase. form. Coronal sections (gross).
49. 2.8 cm. (CR). Alc.-form. Sagittal sections (gross).
51. 3.5 cm. (CR). Form. (?) Paraffin sections, Dr. Milnes, Milan, Mo.
52. 5 cm. (CR). Sagittal sections (gross). Dr. Smiley, Tyler, Texas.
53. ♂ 8.5 cm. (CR). Form. Dr. Albright, Anaconda, Mont.
54. ♀ 15 cm. (CR). Form. (?) Celloidin sections, cross. Dr. Perry, Columbia, Mo.
55. ♂ 6.5 cm. (CR). Form. (?) Paraffin sections, cross, 50 micra. Dr. Hume, Columbia, Mo.
56. 2.4 cm. (CR). Alc. Paraffin sections, cross, 20 micra. Dr. Scholz, St. Louis.
57. 3.1 cm. (CR). Form. Paraffin sections, cross, 20 micra. Dr. Graham, Columbia, Mo.
58. 1.7 cm. (CR). Form. Paraffin sections, cross, 20 micra. Dr. Douglass, Columbia, Mo.
59. 1.1 cm. (CR). Pathological. Alc. Dr. Scholz, St. Louis.
60. 1.1 cm. (CR). Alc. Paraffin sections, cross, 20 micra. Dr. Lewis, Columbia, Mo.
62. 2.7 cm. (CR). Form. Midsagittal section (gross). Dr. Thornton, Columbia, Mo.
63. Abd. viscera, from No. 69. Form.
64. ♂ 26 cm. (tot). Alc. Dr. McCallister, Centralia, Mo.

65. ♂ 12 cm. (tot). Alc. Cleared by Schultze's method. Dr. Scholz, St. Louis.
66. ♀ 18 cm. (tot). Alc. Cleared by Schultze's method.
67. 5 cm. (CR). Alc. Cleared by Schultze's method. Dr. Milnes, Milan, Missouri.
68. 5.5 cm. (CR). Alc. Cleared by Schultze's method.
69. 5 cm. (CR). Alc. Cleared by Schultze's method. Dr. Brunner, Carrollton, Mo.
70. 2 cm. (CR). Alc. Cleared by Schultze's method. Dr. Crandall, Birchtree, Mo.
71. 2.5 cm. (CR). Alc. Cleared by Schultze's method. Dr. Scholz, St. Louis.
72. 2 cm. (CR). Alc. Cleared by Schultze's method. Dr. Tichenor, Chicago.
73. 6 cm. (CR). Alc. Cleared by Schultze's method. Dr. Allee, Olean, Missouri.
74. ♂ 16 cm. (tot). Alc. Cleared by Schultze's method. Dr. Brunner, Carrollton, Mo.
75. ♀ 20 cm. (CR). Alc. Cleared by Schultze's method.
76. ♀ 20 cm. (tot). Alc. Cleared by Schultze's method.
77. ♂ 12 cm. (CR). Form. Topogr. Dissection of abd. viscera. Dr. Perry, Columbia, Mo.
78. ♂ 15 cm. (CR). Alc.-form. Topogr. dissection of thor. and abd. viscera. Dr. Mikel, Columbia, Mo.
79. ♂ 15 cm. (CR). Semi-papyraceous twin. Alc. Dr. Sheley, Independence, Mo.
80. ♂ 20 cm. (CR). Cranioschisis. Alc. Cross sections (gross) of trunk. Dr. Norris, Columbia, Mo.
83. ♀ 20 cm. (CR). Cranioschisis. Alc.
84. ♀ 42 cm. (tot). Lived 5 days. Intravasc. form. Dr. Crawford, Mexico, Mo.
85. ♀ 32 cm. (CR). Cranioschisis, harelip, polydactilism, talipes, etc. Intravasc. form. Dr. Carryer, Columbia, Mo.
86. ♀ 32 cm. (tot). Triplet (with No. 87 and 88). Form. Dr. Munday, New York City.
87. ♂ 33 cm. (tot). (see No. 86). Dr. Munday, New York City.
88. ♀ 32 cm. (tot). (see No. 86.) Dr. Munday, New York City.
89. ♀ 20 cm. (CR). Umbilical cord and placenta intact. Form.
90. ♀ 27 cm. (tot). Alc.
91. ♀ 18 cm. (CR). Craniorachischisis. Alc. Dr. Sheley, Independence, Mo.
92. ♂ 18 cm. (CR). Form.
93. ♂ 16 cm. (CR). Umbilical cord and placenta intact. Form.
94. ♀ 14 cm. (CR). Alc. Hardened *in situ* in intact membranes. Dr. Scholz, St. Louis.
95. 1.8 cm. (CR). Form. Pathological. Dr. Thornton, Columbia, Mo.
96. 2.7 cm. (CR). Cranioschisis, in intact membranes. Form. (?).
97. 1.4 cm. (CR). Alc.-form. Pathological. Paraffin sections, cross, 20 micra. Dr. Lewis, Columbia, Mo.
98. 1.8 cm. (CR). Alc.-form. Paraffin sections, coronal, 20 micra. Dr. Douglass, Columbia, Missouri.
99. 2.6 cm. (CR). Alc.-form. Paraffin sections, Dr. Graham, Columbia, Mo.
100. Pathological, flattened and rudimentary. Dr. Baskett, Mexico, Mo.
101. 2.5 cm. (CR). Pathological. Form., Dr. Wm. Shaefer, Columbia, Mo.
102. 1.2 mm. (CR). Alc. Ovum intact, 8x15 mm. Embryo sectioned, but in very poor condition. Dr. Campbell, Syracuse, N. Y.
103. 4 cm. (CR). Dr. Kaps, Winfred, South Dakota.



104. ♀ 24 cm. (CR). Hydrocephalus. Form. Dr. Cave, Mexico, Mo.
105. ♀ 11.5 cm. (CR). Form. Dr. Stowers, Columbia, Mo.
106. ♂ 40 cm. (tot). Intravase. form. Embedding in celloidin for sectioning. Dr. Taylor, Columbia, Mo.
107. ♀ 5 cm. (CR). Form. Pathological. Dr. Norris, Columbia, Mo.
108. 3 cm. (CR). Zenker's fluid. Paraffin sections, cross, 10 micra. Dr. Norris, Columbia, Mo.
109. 3.5 cm. (CR). Damaged. Zenker's fluid. Viscera embedded in paraffin. Dr. Myer, Columbia, Mo.
110. ♀ 11 cm. (CR). Membranes intact. Form. Dr. Stowers, Columbia, Missouri.
111. ♂ 4.5 cm. (CR). Alc. Dr. Aber, Montserrat, Mo.
112. ♂ 10 cm. (CR). Alc. Dr. Flynt, Molino, Mo.
113. ♀ 10 cm. (CR). Alc. Dr. Flynt, Molino, Mo.
114. Pathological. Body rudimentary. Dr. Stanley, Laclede, Mo.
115. ♂ 4.7 cm. (CR). Form. Paraffin sections. Dr. Auler, St. Louis.
116. ♂ 4.5 cm. (CR). Alc. Damaged. Dr. H. B. Cole, Sedalia, Mo.
117. ♀ 12 cm. (CR). Alc. Dr. H. B. Cole, Sedalia, Mo.
118. ♂ 12 cm. (CR). Form. Dr. H. B. Cole, Sedalia, Mo.
119. Membranes intact, 3 cm. in length, enclosing a rudimentary "mole." Dr. McNutt, Monroe City, Mo.
120. ♀ 5.5 cm. (CR). Alc. Dr. Peak, Springfield, Mo.
121. ♂ 4.6 cm. (CR). Paraffin sections. Dr. Herndon, Camden Point, Mo.
122. 3.9 cm. (CR). Paraffin sections. Dr. Herndon, Camden Point, Mo.
123. ♂ 6.8 cm. (CR). Form. Dr. Goshwiller, Novinger, Mo.
124. 1 cm. (CR). Form. Damaged. Dr. Hauck, St. Louis.
125. An early ovum, disk-shaped, 5x10 mm., covered with villi except at one pole. Unopened. Alc. Dr. Scholz, St. Louis, Mo.
126. 1 cm. (CR). Damaged. Alc. Dr. Scholz, St. Louis.
127. 3 cm. (CR). Damaged. Alc. Dr. Scholz, St. Louis.
128. ♀ 7.5 cm. (CR). Alc. Dr. Scholz, St. Louis.
129. ♂ 8.5 cm. (CR). Alc. Dr. Scholz, St. Louis.
130. ♀ 9.5 cm. (CR). Alc. Dr. Scholz, St. Louis.
131. ♀ 7 cm. (CR). Form. Drs. Blesch and Reed, Guthrie, Okla.
132. Tubal pregnancy. Early ovum protruding from ruptured tube. Alc. form. Dr. Myer, Columbia, Mo.
133. 1.6 cm. (CR). Form. Paraffin sections sagittal, 20 micra. Dr. Pond, Webster City, Iowa.
134. 1.2 cm. (CR). Form. Paraffin sections, cross, 20 micra, series incomplete. Dr. Clark, Pittsburg, Pa.
135. 1.3 cm. (CR). Form. Dr. Reed, Guthrie, Okla.
136. ♂ 7.7 cm. (CR). Twin to No. 137. Form. Embedding in celloidin. Dr. Reed, Guthrie, Okla.
137. ♂ 8.8 cm. (CR). Twin to No. 136. Form. Dr. Reed, Guthrie, Okla.
138. 1 cm. (CR). Damaged. Form. Dr. Musson, Norborne, Mo.
139. ♀ 33 cm. (tot). Twin to No. 140. Form. Topogr. dissection of thor. and abd. viscera. Dr. Boucher, Marshalltown, Ia.
140. ♀ 33 cm. (tot). Twin to No. 139. Form. Dr. Boucher, Marshalltown, Iowa.
141. Rudimentary embryo. in membranes. 2nd. month. Dr. Boucher, Marshalltown, Ia.
142. 1.5 cm. (CR). Damaged. Form. Dr. Boucher, Marshalltown, Ia.
143. ♂ 12 cm. (CR). Embedding in celloidin. Form. Dr. Dunnivant, Kirkwood, Mo.
144. 1.6 cm. (CR). Alc. Dr. Hill, Eldorado Springs, Mo.

145. ♂ 23 cm. (CR). Form. Dr. Boucher, Marshalltown, Ia.
146. 1.8 cm. (CR). Alc. Dr. Tapscott, Mt. Pisgah, Ark.
147. 2.3 cm. (CR). Alc. Paraffin sections. Dr. Ryland, Lexington, Mo.
148. ♂ 6.5 cm. (CR). Form. Dr. Ryland, Lexington, Mo.
149. 1.2 cm. (CR). Tubal pregnancy, ruptured tube enclosing damaged embryo. Alc.-form. Dr. H. B. Cole, Sedalia, Mo.
150. ♀ Newborn, badly preserved. Dr. Corbin, Bloomfield, Mo.
151. ♂ 18 cm. (CR). Form. Dr. Brunner, Carrollton, Mo.
152. ♂ 11 cm. (CR). Twin to No. 153. Form. Placenta and membranes intact. Dr. Eyermann, St. Louis.
153. ♂ 11 cm. (CR). Form. (See No. 153). Dr. Eyermann, St. Louis.
154. ♀ 16 cm. (CR). Alc. Placenta and cord intact. Dr. Woodside, Johnston, Ill.
155. ♂ 13 cm. (CR). Alc.-form. Twin to No. 156. Dr. Allee, Lamar, Mo.
156. ♀ 13 cm. (CR). Alc.-form. (See No. 155). Dr. Allee, Lamar, Mo.
157. 3.5 cm. (CR). Alc. Damaged. Dr. Allee, Lamar, Mo.
158. 3.5 cm. (CR). Alc. Dr. McGaugh, Richmond, Mo.
159. 3 cm. (CR). Alc. Dr. McGaugh, Richmond, Mo.
160. 2 cm. (CR). Alc. Dr. McGaugh, Richmond, Mo.
161. Rudimentary embryo, pathological. Form. Dr. Eyermann, St. Louis.
162. ♂ 12 cm. (CR). Form. Dr. McGaugh, Richmond, Mo.
163. ♂ 6 cm. (CR). Form. Dr. McGaugh, Richmond, Mo.
164. ♀ 20 cm. (CR). Intravase. form. Dissection of abd. viscera. Dr. Simison, Columbia, Mo.
165. 4.5 cm. (CR). Bichloride-alc. Dr. Bell, Columbia, Mo.
166. 0.5 cm. (CR). Form. Pathological. Dr. Crow, St. Louis.
167. ♂ 12 cm. (CR). Form. Damaged. Dr. Woodside, Johnston City, Ill.
168. 3.5 cm. (CR). Form. Dr. Phillips, Columbia, Mo.
169. ♀ 7.5 cm. (CR). Form. Placenta and membranes intact. Pathological. Dr. Stowers, Columbia, Mo.
170. 2.7 cm. (CR). Form. Damaged. Dr. Eyermann, St. Louis.
171. ♂ 21 cm. (CR). Form. Placenta and membranes intact. Knot in umbilical cord. Dr. Eyermann, St. Louis.
172. ♂ 18 cm. (CR). Form. Placenta and umbilical cord intact. Dr. Riggs, Virginia, Minn.
173. ♀ 11 cm. (CR). Form. Semi-papyraceous. Dr. Crawford, Eldorado Springs, Mo.

Although the number of specimens in the collection is at present too small for conclusive results from the statistical standpoint, the following table showing the distribution according to age and sex is at least interesting and suggestive. The age has been calculated by the aid of Mall's rule, which is as follows: For embryos less than 100 mm. long (crown-rump length), the age in days equals the square root of 100 times the length in mm. For specimens of from 100 mm. to 200 mm. crown-rump length, the length in mm. equals the age in days. For later foetuses, Hasse's well known rule was used. The sex is indicated only in specimens in which it could be determined by inspection of the external genitals.

## DISTRIBUTION ACCORDING TO AGE AND SEX.

Lunar Month	Male	Female	Undetermined	Total
I	—	—	4	4
II	—	—	37	37
III	9	3	13	25
IV	6	6	—	12
V	9	5	—	14
VI	4	5	—	9
VII	8	4	—	12
VIII	7	13	—	20
IX	5	5	—	10
X	9	3	—	12
Grand total	57	44	54	155

Before considering the age of the specimens, it should be stated that they (with the exception of the 26 Berlin specimens) were obtained from the private practice of a number of physicians who have, as a rule, sent me all the specimens at their disposal. A collection made in this way would necessarily be relatively deficient in very early embryos, which often escape attention, and in the later foetuses, which the parents often refuse to surrender. The deficiency in the later stages is supplemented by the specimens collected in Berlin, which make up 26 of the 63 foetuses of the last five lunar months, and which include no earlier stages. As to the first month, it can only be said that abortions of this period would perhaps be most numerous of all, if they could be accurately determined.

Bearing in mind these limitations, we may observe that the table indicates a maximum number of abortions in the second lunar month. This does not agree with the statement often met in the textbooks that abortions are most numerous in the third month. Following the second month, the table indicates a decline, with apparently a second increase about the eight month.

As to sex, it is already well known that the males predominate, not only in living births (the males exceeding the females by about 6 per cent.), but also in still-births. According to Abbott (article "Vital Statistics" in Buck's Reference Handbook of the Medical Sciences, New York, 1904): "The deaths of still-born males are usually from 25 per cent to 50 per cent. greater in number than those of females. In the 40 years 1856-1895, there were registered in Massachusetts 31,656 male still-born children, and 21,202 females of the same class."

Cazeau and Tarnier (Theory and Practice of Obstetrics. Am. Ed. Phil. 1893) make the following statement: "Morgagni and Desormeau supposed that abortions of foetuses belonging to the female sex are more numerous than of males, and I do not know whether the vulgar opinion opposed to this is true or false; but certain it is that at term



the boys exceed the girls in the proportion of sixteen to fifteen, which would seem to prove that female abortions are the most numerous."

This idea that females must be more numerous in the earlier abortions because the males preponderate later evidently rests upon the assumption that at the beginning the sexes are equal in number. So far as I know, however there is no evidence to support this view. On the contrary, the table above indicates that the preponderance of males is still evident in abortions as far back as the third month. It would be interesting to know whether this preponderance of males continues back to the time when the sexes are first distinguishable by microscopic examination, but my observations on this point are as yet too few to be worthy of mention. Incidentally it may be noted that the results of the latest investigations seem to indicate that sex is determined at the time of fertilization of the ovum.

As shown in the foregoing table, of the 101 specimens in which the sex could be determined by external examination, 57 are males, and 44 females. This shows a male preponderance of about 30 per cent., which is within the limits of Abbott's figures.

Finally, it may be noted that the collection includes one set of triplets, five pairs of twins, and three twins whose mates survived. The significance of these figures is apparent when it is remembered that of living births twins occur, on the average, only once in a hundred cases, and triplets only once in a thousand. While it is not likely that this large proportion of twins and triplets would be maintained in a larger collection, still it seems unquestionable that the percentage is much larger in abortions and still-births than in living births.

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## NON-LITHOGENOUS OBSTRUCTION OF BILIARY DUCTS.

BY A. H. CORDIER, M. D., KANSAS CITY, MO.

A few years ago the appendix was the focal center of discussion. This subject was discussed by the most noted surgeons and physicians of the world, and the literature on appendicitis and its management would make a library of many volumes.

The usual phases of appendicitis were thus made recognizable, and an almost unity of opinion as to the proper treatment of this disease was thus brought about. Later, the trend of investigation has been centered in the biliary tract, and the progress here has been equally noticeable. For years, gall-stones were the only condition that received much attention from the pathologist and surgeon; stones in the gall-bladder and common duct were looked upon as the cause of most of the later, then recognized, diseases of the biliary tract. Further clinical study, operative and post-mortem findings have demonstrated beyond doubt that these foreign bodies (stones), when such exist, are the result of a pre-existing disease of the ducts and gall-bladder, and

that in the great majority of instances this disease was of bacterial (inflammatory) origin. It was claimed that those of sedentary habits, and insane patients, were especially prone to the formation of gall-stones and that at post-mortems a large number of gall-stones were often found in patients who had died of other diseases, and who, during life, had not had any symptoms of gall-stones. This later statement is used by some, even to-day as an argument against the surgical management of these cases.

Our text-books, up to within a very short length of time, have been mis-leading, both in the interpretation of manifested symptoms, in the manner of detecting by examination, evidences of diseases in the biliary tract, and in the recommending the proper management of these when diagnosed.

It was advised that an operation on these ducts or gall-bladder be not performed, unless: 1. Jaundice was severe and persistent. 2. Colic lasting and of frequent recurrence. 3. Evidence of an abscess in gall-bladder. All very late manifestations of biliary tract disease.

Gall-stones do not form in a few days; they are late manifestations of a pre-existing disease. The gall-stone cases we are all familiar with when they present the typical history. It is the unusual features of the pathology in this locality that we are endeavoring to solve and remedy at this time.

There is a large class of cases coming under the general head of Non-lithogenous obstruction of biliary passages of which we are not so familiar, and to this variety I desire to call attention in this paper.

A stricture of the common duct may have its origin in the long incarceration of a stone, the stone later passing into the duodenum or ulcerating into the bowel. In that event, no stone would be found at the time of operating. Numerous instances of this kind have been reported. This class of cases would be hard to understand at the time of operating, unless a carefully gotten clinical history was obtained; such a case I report in number 1.

CASE 1. Mr. W., aged 55. Three years ago this gentleman had several very severe attacks of gall-stone colic, followed by jaundice. The last attack of colic being followed by a persistent jaundice: No stones could be discovered in the faeces for weeks following the attacks. Two years ago after an attack of "fever," accompanied by severe tenderness in region of pylorus, he passed a large gall-stone. His symptoms got better, and his jaundice, in part, disappeared for a few weeks, then reappearing as severe as before the stone passed.

When I first saw him he was almost a chocolate color, the jaundice was so intense. A large pyriform fluctuation enlargement was easily discernible in the region of gall-bladder.

Operations revealed a gall-bladder that held four pints of bile and mucous. A careful search for a stone failed to find one. Just

where the common duct passed behind the duodenum was an indurated mass that was evidently the site where the large stone had ulcerated into the duodenum, and in healing had formed a complete stricture of the duct at this point. The duct was very much dilated above this point. An anastomosis was made between the gall-bladder and the jejunum. His symptoms have all disappeared, and three years later he reported himself entirely well.

The stricture in those cases following an injury to duct from an impacted stone are usually more defined to the examining finger owing to the dense adhesions resulting from the inflammation changes surrounding the duct.

The cystic duct stricture may form from the same causes that produce obstruction in the common duct; in fact, there exist much more favorable conditions for the formation of a stricture here than elsewhere in the biliary passage; there exist more dense surrounding strictures to become inflamed and thus compress the duct; there is no constant flow of an aseptic (bile) fluid to clear the canal of any bacterial invasion from the intestine, or to wash away any sedimentary nucleus that only too often acts as a destructive agent to the protective epithelium of the mucous membrane, thus permitting bacterial invasion to the deeper layers of the tract. An obstruction, when once started in cystic duct, will, in all probability, continue to form until the canal is obliterated. Thus we have the gall-bladder with its natural function cut out from the bile circuit and its cavity filled with the product of its own manufacture or that due to the presence of infectious bacteria, thus converting this sac, that naturally has a daily interchange of its contents with healthy bile, into one with no outlet. The progress is either one of a cholecystitis obliterans with the destruction of the mucous membrane and hyperplastic thickening of the viscus wall or the gall-bladder becomes a retention cyst, dilating to an enormous size in some instances, as in one of my cases the gall-bladder held three or more pints of a sero-sanguinolent fluid. In the obstruction of the cystic duct at its time of operating one of the four methods of dealing with the conditions is resorted to. If the obstruction is one of recent date, and due to a purely inflammatory (acute) process, the opening of the gall-bladder after stitching it in the parietal incision, followed by drainage, may be all that is necessary, as with the subsidence of the acute process the canal becomes pervious, as bile will begin to flow freely from the established fistula when this end has been attained.

Drainage of the gall-bladder externally will become less and less a procedure resorted to as we appreciate more that the gall-bladder, like the appendix, when full of strictures, is best taken care of in a specimen bottle filled with a good preservative.

In the chronic cases, when the gall-bladder is a mass of scar-tissue,



contracted, thickened, and obstructed, a cholecystectomy should be performed.

A third method, and one that usually brings results that are all that could be desired, is by making an anastomosis between the gall-bladder and some part of the intestinal canal, the jejunum being the preferable site.

A class of patients will be met with occasionally who are in a desperate physical condition, and in no shape to stand a prolonged surgical procedure, in whom, at time of operating, an enlarged gall-bladder is found surrounded by firm vascular adhesions, and in whom no stone can be found by palpation in common duct, yet, that canal is obstructed; in such cases a cholecystectomy would be the proper procedure.

In making the anastomosis, I believe that the Murphy button gives the largest opening, the most permanent and satisfactory results.

This operation, in properly selected cases, is to be preferred to all other methods of relieving the individual of his burden of taking care of the bile in his blood. Many cases of narrowed pylorus and dilation of the stomach have their origin in adhesions surrounding biliary ducts, and are relieved by a proper separation of the adhesions and removal of the cause of the adhesions.

There are a class of cases presenting an obscure train of symptoms pointing to the vicinity of gall-bladder and biliary ducts as their source; as, a vague sense of uneasiness, occasionally painful spells lasting a few minutes with attacks of indigestion and painful flatulency. At the operation no stones are found, no stricture of duct is discovered, no visible change in gall-bladder is discernible, in fact, nothing is detected except a few adhesions between cystic duct and common duct or duodenum. A separation of these adhesions, with a liberation of the bound-down ducts and viscus from the constantly nagging, distended stomach and intestines, will, as a rule, bring relief to the patient.

The all-important question of early diagnosis is ever present in all pathologic processes. A diagnosis in the early history of most surgical cases would rob those cases of their later destructive process to the organ affected and ward off damage to remote organs. A simple process by time and complication becomes one of danger, and much more difficult to deal with surgically. Add to a delayed diagnosis, professional tardiness in recommending the proper method of relief, and the opposition of the patient to accept the preferred relief, and we have all that is necessary for the development of serious complications. It makes the surgery difficult, attended by a too high mortality, and a failure often to relieve symptoms and a protracted convalescence. I report this unusual case of non-lithogenous obstruction of common duct to illustrate the remote and irreparable damage to other organs—the spleen and the liver.

Case 2. Mr. R., aged 21. At the age of three years this young man's parents noticed that he was jaundiced, and even before that time the attacks of pains, very severe in character and of long duration. These attacks of "colic" so-called, continued to recur at irregular intervals, to be followed by an increase in the jaundice. The skin has never cleared entirely since the beginning of his attacks. The stools have at times been acholic but as a rule, there has been evidence of some bile in the faeces.

When I first saw him, I found him jaundiced, poorly nourished, careworn and exhausted. Pulse 58, temperature 97.50, poor appetite, inability to digest much fatty food, stools only faintly bile-stained, urine specific gravity 103, loaded with bile.

Examination.—Abdomen enlarged on left side, dullness over area from rib order to ileum. No tenderness on firm pressure at any point. Nothing abnormal in liver or gall-bladder region could be detected on palpation or percussion. No fluid in peritoneal cavity.

Diagnosis.—Common-duct obstruction, probably congenital or cicatricial enlarged spleen, as a result of circulatory interference in cicatricial enlarged spleen, as a result of circulatory interference in liver.

Operation.—Usual parietal incision for a common duct operation. Tissues, when cut, look like a carrot. Bled very freely from smallest of vessels; spleen enlarged, not nodulated. Gall-bladder thickened and only slightly enlarged. No stones in gall-bladder or in any of the hepatic or common ducts. Just where the common duct passed under the first portion of the duodenum the duct was as hard as a tendon, and appeared to be in very much the same pathologic condition that is found in appendicitis obliterans (cholangitis obliterans). The gall-bladder was opened and explored carefully with probe to establish the patency of cystic duct. Anastomosis was made by the aid of Murphy button with upper portion of the jejunum.

His recovery was the usual one of a successful abdominal section. The stools soon became bile-stained, his skin began clearing at the end of three days, and at the end of five weeks was quite clear for a skin that had been bile stained for eighteen years.

His appetite for fats developed soon, and his weight increased rapidly. His attack of pain disappeared. I heard from him this week, one year after operation, and he weighs 160 pounds and is feeling fine. The button in this case passed on the seventeenth day after the operation.

This case is of much interest because of the character of the pathology, duration of the same, and the rapid restoration of the patient's health. The changes in the liver and spleen produced by long-continued duct obstruction, I am afraid, are of such a character that a permanent and satisfactory cure will not be obtained in this case.

Traumatism in the vicinity of the ducts may lead to a stricture of the duct, as the following case illustrates:

Mr. ———, aged 55, some few years ago, received a kick over the liver, this led to a severe attack of localized peritonitis. His symptomatic recovery was tardy. One year ago he began having pain in the region of gall-ducts, and soon a jaundice developed, that has persisted up to the time I first saw him. An operation revealed extensive adhesions and the canal of the common duct obliterated for an inch and a half. An anastomosis was made between the gall bladder and the jejunum, his pain, jaundice and other symptoms disappearing from that time to the present; two years later.

Case 3. Mrs. T. Aged 45. This lady for two or three years, has had severe digestive disturbances. For last six months she has had repeated attacks of uneasiness and tenderness in region of head of pancreas, and during this time she has developed an ascities and a continuous jaundice with much loss of weight. In fact, the history is one of a malignance in the pylorus or head of the pancreas. An operation revealed a distended gall-bladder and dilated common duct; the head of pancreas was much enlarged and hardened; there were no stones to be found. The pancreatic enlargement had completely closed the duodenal opening of the common duct.

A cholecystenterostomy was performed; the symptoms disappeared and up to this time, one year later, have not recurred.

This was a case of chronic pancreatitis which involved the ductal opening into the duodenum.

I recall another case in which there had been a local peritonitis involving the common duct, the adhesions bending the duct to such an extent that a recurring jaundice extending over a period of years was a feature of the case; more or less pain being present all the time. This case was completely relieved by breaking up the adhesions and straightening the ducts.

The cancerous invasion of the duct in this location are frequently due to some unrecognized benign pathology that has persisted for years, the late manifestations simulating very closely lithogenous obstruction, a diagnostic feature of cancer being a gradual and continuous jaundice when once established, differing in this respect from the ball valve stone action in common duct.

One source of a transient jaundice that may lead to a diagnosis of lithogenous obstruction is a displaced right kidney the pedicle of which in its abnormal position, may elbow the common duct and produce a jaundice.

The symptoms of this condition are not sufficiently typical in all cases to warrant a diagnosis of the exact character of the pathology causing the obstruction. However, the presence of an imprisoned gall-stone in the duct is usually accompanied by sufficient symptoms to in-



dicate its presence, and the discovery of a misplaced kidney will point to the probable source of the icterus.

A patient, having escaped the acute septic process of an invasion of the colon bacillus into the deeper structures of the common duct and gall-bladder, may at a later period develop symptoms due to the later mechanical effects of this inflammatory process, either in the form of a stricture of common duct, or if the process has run a chronic course, there may be a cholangitis obliterans, thus closing the duct. I have seen two or three such cases. Drainage of the gall-bladder into the jejunum has relieved the all.

As we learn more of the pathology located so frequently in the duodenum, we are better able to understand some of the obscure symptoms pointing to that locality as their source. Ulcers in the duodenum located near the entrance of the common duct, in their healing process may include this opening in the cicatrix and produce a closure of the duct and thus produce the usual train of symptoms that accompany the closure of the duct from any cause.

Of much value is the clinical history in these cases, as the symptoms and history are somewhat at variance with that of a stone-obstructed bile duct.

Appendicitis obliterans has long been recognized, but the same pathology in the common bile-duct is a comparatively recent acquisition to our knowledge in this locality. I have seen a few such cases where, at the time of the operation, the duct rolled under the finger like a tendon, so completely was the normal structures destroyed by the chronic cholangitis.

If the obliterative process is confined to the common duct, which is rare, there will be present a persistent jaundice the intensity of which will depend on the completeness of the obliteration. With the jaundice will be the usual train of adhesive symptoms in this locality, as gaseous distension of the colon, interference with stomach and intestinal digestion, painful peristalsis, etc.

If the obstruction is located in the cystic duct, and the gall-bladder escapes the usual contraction, due to the presence of a cholecystitis this viscera may continue to manufacture mucus and if infected (as it usually is) a muco-purulent distention takes place, and a pyriform retention cyst is produced, usually detectable below the border of the liver in these emaciated patients. In this condition, jaundice is absent, and the patient will have fever, stomach and intestinal disturbances. These cases are especially liable to recurring attacks of fever, as the absence of bile in the gall-bladder robs nature of one of the most efficient inhibiting bactericidal fluids. These are fit cases for a cholecystectomy, as drainage of the gall-bladder is too uncertain in its curative effects, the opening either refusing to close, or if it does, close, the symptoms are renewed.

Stricture is invariably the late manifestations of some previous pathology, as a healed ulcer, or from stone pressure. These strictures may be complete or partial, extending for only a few lines to an inch or more along duct. The symptoms varying according to the situation of the obstruction and condition of the adjoining structure and organs.

The growth leading to an obstruction of the bile-ducts are of the same character as those found in other parts of the abdomen, the malignant neoplasms predominating, and giving rise to a train of symptoms hard to diagnose, early, from a ball-valve stone in the common duct; a characteristic feature of the jaundice produced by a malignant growth being, when once well established, intense and persistent, the patient showing more severe and early constitutional effects in the malignant cases.

Where the complete obstruction of the duct is the outcome of a long impacted stone resulting in a cancer the diagnosis of the latter is extremely difficult prior to operation.

Cancerous obstruction occurs most frequently in the lower portion of the common duct, the location of most lithogenous obstructions, also.

In determining the existence of an obstruction, its location, extent, and character at time of operating, I have for fourteen years resorted to hydrostatic pressure, by introducing through an aspirating needle into the gall-bladder a saline solution from a moderate height, or if this viscus has been opened, the nozzle of an irrigating-syringe, or if the common duct has been opened, by irrigating directly into the duct.

In cases where the duct is imbedded in a mass of adhesions and has lost its identity, it can be made to stand out distinctly by water-pressure introduced through gall-bladders, provided the cystic duct is patent; by this same process the patency of the duct, after removal of one or more stones, can be determined, as I have on several occasions run rather a large quantity of saline directly into duodenum through gall-bladder, cystic and common duct. As a means of determining the security of the duct stitching where the opening in this canal is closed by suture, this method is invaluable, disappearing stones and other debris can thus be washed out of the biliary tract. I am sure if this simple, safe, and efficient procedure were carried out more frequently, there would not be so many post-operative biliary fistula or failures to remove the obstruction nor would so many secondary operations be required.

## THE PHYSICIAN AND THE ASSOCIATION AS SEEN BY THE COUNTRY DOCTOR.\*

BY J. B. NORMAN, M. D., CALIFORNIA, MO.

My subject today partakes of the economic and the ethic rather than of the scientific. I have no apology to offer for its selection, more than to say that in my opinion, we devote too little time to the discussion of our professional duties, and the relation that ought to obtain between members of a great profession. Medical organization has been the central theme in almost every meeting of medical men in this state for the past five years. It is pleasant indeed to contemplate the union of the medical profession of this state into a compact organization with purposes and powers for good. Such an organization I believe to be possible, the nucleus of such an one we now have, and if it ever attains that state of perfection which we hope, it must be by the individual efforts of all of its members. The organization of the profession into one body, without distinction as to scientific attainments, stability of character or ethics of practice, would form a cosmopolitan mass of conflicting interests and diversity of opinions wholly incapable of harmonious union. The gentlemanly physician of the old school, as depicted, by Ian Maclaren, and the blatant quack of modern times, who preys upon human suffering and pauperizes widows and orphans, are the extremes between which are many degrees of manhood and many varieties of medical vampires. We must needs draw the line between those who may and those who may not be admitted to our organization, and the distinction between the poorest of the one and the best of the other is so slight as to be almost imaginary. The county society is the basic unit of the organization, and upon it devolves the duty of passing upon the eligibility of applicants for membership, and of applying disciplinary power to those who, once within the pale of the society, so far transgress the laws of genteel manhood, as to place themselves outside the line of demarcation prescribed. I may go farther and say, that each and every member of the society, in his individual life, by precept and by example, by daily self-examination and mode of practice, should strive to raise the boundary line of ethics to such a plane as must be seen by every intelligent layman. I do not mean to encourage the making of complaints against others, but rather let each look for reasons why he may complain against himself. I have not advertised my cures in the lay press, but what have I said to that man or that woman, that led him or her to believe in my superior ability, and to discount the professional skill of all my competitors? Was it strictly true? Was

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\*Read before the Moniteau County Medical Society at Latham, Mo., October 11, 1906.



it ethical? Was it manly? Was that last case as bad as I represented? Was the cure as marvelous as I led them to believe? Have I fostered ignorant superstitions and traditions to conceal my own ignorance or to enhance the greatness of my cures? Have I pretended to do more with my instruments and appliances than I know can be done? Have I given my name or my influence to push the sale of any nostrum? Have I claimed, or have I permitted others to claim for me, special knowledge of a remedy not generally known to other physicians? Have I taken a patient from a competitor? Have I by word or deed, voluntarily or otherwise, discredited the diagnosis, treatment or professional skill of any reputable physician? Have I bid for the business of my competitors by making lower charges, or by offering to make lower charges than they? These are the things wherein we sometimes fail. Brother, are you guilty? Stand up and be counted.

This human weakness is an individual quality of the man and he alone is responsible for its cultivation and maintainance. While the secret practice of any or all of these things may not immediately banish us from our society, it will serve in time to alienate our competitors and lose for us the good will and esteem of all reputable physicians. The physician who looks upon his professional training as merely an asset to his commercial value is unworthy the confidence of a human being. In the light of this statement, it seems strange that physicians will continue to be gulled by a certain journal, published in our own state, whose chief object of existence is to promote the sale of the various proprietary preparations and nostrums in which the editor has a material interest. So palpable does this appear in its pages, that we can only wonder at the gullibility of man. What is true of this particular journal, is true in a lesser degree of all trade journals, and the safe course is to not encourage or patronize them in even the smallest degree. As a profession, we have it in our scope of influence to banish from all medical journals and from many lay journals and papers, the obnoxious proprietary, patent medicine and fake cure advertisement. Did you ever in your religious paper, no matter what its name or denomination, observe the many fake cure and patent medicine poisons advertised? Their very numbers prove the value of the religious press to that class of fakirs. And be it said with shame that there are none so susceptible to the blandishments of the advance agent and his complimentaries, and none more willing to prostitute their calling by lending their names to promote the sale of patent medicine poisons and fakirs, than is the ministry. Lest I incur some harsh criticism for this statement, I will say just here that I have a right to predicate such a conclusion upon the number of apparently sincere, life-saving endorsements from the clerical profession which we see in almost every paper. I believe it is our duty to pro-

test to the publishers of our religious papers against the practice of prostituting religion in the interest of vampires, who prey upon the poor and afflicted. *Collier's Weekly*, *The Ladies Home Journal* and several other journals of wide circulation, have recently begun a war upon the patent medicine fraud and the advertising quack. It is our duty to give these journals our heartiest support and I have had them place my name upon their subscription list as a token of my appreciation of their work. It may not be out of place to say that a member of our own State Association and the editor of a so-called medical journal, has recently seen fit to espouse the cause of patent medicines and quack cures, by attacking "The Great American Fraud" articles in *Collier's Weekly*. This editor, while possessing rather an unsavory reputation, has, I believe, managed to keep up his connection with the state society. The very fact of his good standing in our state association will enable the Proprietary Association, whose tool he is, to use him with good effect in counteracting the influence of the exposures which *Collier's Weekly* and *The Ladies Home Journal* have made. He has recently merged his journal into another hitherto reputable journal, which journal should, on this account be denied admission to the desk of every decent physician. It is to be hoped that his local society will deal with him as he deserves and that the profession of the state will refuse to recognize him any more than it would any other quack. I would not counsel undue haste in disciplining a member, in whom is left a spark of ethics, but when he openly and publicly and defiantly gives proof of his unethical disposition, I believe the quicker and the harder he can be dropped the better.

The Missouri State Medical Association is a creature of the organized medical profession of the whole state. It is as much your association and my association as it is any other man's association, and we each owe it our loyalty and support. If it stands as a truly representative organization, it must and will reflect the interests and opinions of the profession of the whole state. Does it do this? If not, why not? Is it really and truly what it pretends to be, a representative organization of all of its members? This question, even without its answer, will, I have no doubt, be construed as a criticism. While I desire not to be considered hypercritical, still if there be a faulty policy, which may in time jeopardize the usefulness of the organization, I believe it the part of wisdom to freely, openly and frankly discuss it and endeavor, as far as we may, to correct it. Physicians may for a time attend their societies and associations from a sense of duty, but ultimately their interest will wane, their energies relax and their attendance fail. It may be laid down as a fixed principle of life, that personal interest only will attract. If I attend my county society or state association, or whatever organization, there must be something of interest there, beside the mere satisfaction of duty done. The percentage of attendance at our annual meeting is very small, but the per-

centage of attendance of the city physician as compared with that of the country doctor, is relatively large. Why, may I ask, is this true? If my reasoning thus far is correct, the city physician surely finds some interest and attraction there not common to his country cousin. To the country doctor, it is a period of relaxation and rest in the society of his fellows and the hope that he may glean from them some practical idea, which stored away in some deep convolution of his grey matter, will sometime serve him in his lonely battle against disease and death. He does not care to hear a description of some rare disease, which he never saw and which in all human probability, he never will see, neither does he want to hear a tabulated report of five hundred operations for this, that or the other disease; but what he really would like is practical ideas of every day diseases as seen by the general practitioner. True, he has a professional interest in all medical subjects, but during these three days of mingled social and scientific intercourse his mind serves by preference the utilitarian.

On the other hand, the city physician, who in almost all cases is a specialist, looks to the country doctor for a large per cent. of his cases. He too cultivates both the social and the scientific of the annual meeting, but with an entirely different motive. He is not looking for ideas, but he is there to impart ideas. He reads a learned paper upon some abstruse and unheard of subject, designed to impress his hearers with his deep erudition, vast experience and peerless skill. He patronizingly shakes the hand of the country doctors whom he meets, and when some general practitioner reads a paper upon typhoid fever or some other equally vulgar subject, he very kindly walks out into the hall and smokes a cigar, or holds a conversation with some friend in the rear of the audience. To him, the annual meeting is a seed time, and he does not fail to attend and read his paper. When the scientific program offers but little to interest the country doctor, who can blame him if he fails to attend? If we are to judge from the program alone, it would too often appear to be a city association instead of a state association. I believe the country doctor, perhaps less polished, but often more resourceful, who has successfully fought the battle alone, can teach us many things that the city physician, with all his polish, knows not of. If our association is to be a real state association, there ought to be and there must be, a larger per cent. of country doctors upon the program of our annual meetings. But you say: "The country doctor will not accept a place upon the program of our annual meetings." Perhaps to a certain extent that is true. They have been overawed by the city doctors until they are afraid to speak out in meeting. The committee on scientific communications appears to belong by right of discovery, or some other right, to the city doctors. Would you expect such a committee to be successful in inducing his timid country brother to take a place on the program? The very small representation which we have upon any committee or in any part of the administration of association affairs, deters the modest ruralist from "butting in." When we cease to worship the city physician as a human God, merely because he is from the city; and cease to regard the country physician as a fool simply because he is from the country, we will be in a fair way to a more perfect organization.



# Journal Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies.

Published Monthly under the supervision of the Publishing Committee

ADDRESS ALL COMMUNICATIONS TO 534 NORTH VANDEVENTER AVENUE, ST. LOUIS.

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Volume III.

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Number 8

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E. J. GOODWIN, M. D., EDITOR.

PUBLICATION COMMITTEE:

C. M. NICHOLSON,

WALTER B. DORSETT.

B. M. HYPES.

W. G. MOORE.

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## EDITORIAL.

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### MEDICAL MEASURES IN THE LEGISLATURE.

The recommendations which the Committee on Medical Education made to the Association, and which were adopted and referred to the Committee on Public Health and Legislation, have been embodied as amendments to the present act regulating the practice of medicine, and have been introduced in the Legislature by Senator Devilbiss. A bill making the crime of abortion a felony has also been presented, in the House by Dr. W. E. Gibson of De Soto, and in the Senate by Dr. Devilbiss. The Committee of the State Association also has been instructed to endeavor to reduce the time during which malpractice suit can be brought, from five years to one year. After considerable consultation with members in the Legislature and also with those conversant with the law, the Committee has had introduced, through Senator Kinney, a bill in conformity with the general ideas of the Association's resolutions.

The medical men, members of the General Assembly, have had conferences with the Legislative Committee, and have assured the members of the Committee of their hearty co-operation in connection with all matters that may be brought up by it. We are informed that so soon as the Committee of the House and Senate shall take up the consideration of these various measures, the Auxiliary Committee, a partial list of which is printed on next page, will be notified and their cooperation requested, as it may be considered most advantageous. We urgently request those county societies who have not as yet elected a representative for this Auxiliary Committee to do so at their earliest convenience and send the name and address to the chairman of the Legislative Committee, in order that the organized assistance of our county medical societies may be brought to bear for the accomplishment of the ends which the profession desires to attain.

## MEMBERS OF THE AUXILIARY LEGISLATIVE COMMITTEE.

COUNTY.	NAME.	ADDRESS.	COUNTY.	NAME.	ADDRESS.
Adair,	E. C. Grim,	Kirksville.	Miller,	W. S. Allee,	Olean.
Audrain,	E. S. Cave,	Mexico.	Mississippi,	A. W. Chapman,	Charleston.
Barton,	A. B. Stone,	Lamar.	Nodaway,	Geo. Nash,	Maryville.
Benton,	E. E. Holtzen,	Cole Camp.	Nodaway,	M. M. Pollard,	Barnard.
Buchanan,	Chas. W. Fassett,	St. Joseph.	Nodaway,	L. E. Dean,	Maryville.
Butler,	J. J. Norwine,	Poplar Bluff.	Phelps,	S. L. Baysinger,	Rolla.
Callaway,	J. F. Harrison,	Fulton.	Platte,	C. E. Benham,	Parkville.
Carroll,	R. F. Cooke,	Carrollton.	St. Clair,	W. E. Bell,	Osceola.
Cass,	H. S. Prentis,	Pleasant Hill.	St. Francois,	C. P. Poston,	Bonne Terre.
Chariton,	M. B. Austin,	Brunswick.	St. Genevieve,	G. M. Rutledge,	St. Genevieve.
Cooper,	O. W. Cochran,	Gooch Hill.	St. Genevieve,	H. J. Morganstein,	Weingarten.
Davies,	W. L. Brosius,	Gallatin.	St. Genevieve,	C. J. Hertich,	St. Genevieve.
Franklin,	C. F. Briegleb,	St. Clair.	St. Genevieve,	J. A. Wilkins,	St. Marys.
Gasconade-Maries-Osage,	John D. Seba,	Bland.	St. Louis,	H. G. Wyer,	Kirkwood.
Grundy,	W. H. Addington,	Spickards.	St. Louis City,	H. J. Scherck,	St. Louis.
Howard,	C. H. Lee,	Fayette.	St. Louis City,	R. M. Funkhouser,	St. Louis.
Howell,	D. T. Powell,	Thayer.	St. Louis City,	F. R. Fry,	St. Louis.
Jackson,	E. H. Thrailkill,	Kansas City.	Scotland,	O. F. Pile,	Memphis.
Jasper,	L. I. Matthews,	Joplin.	Vernon,	J. M. Yater,	Nevada.
Laclede,	J. A. McComb,	Lebanon.			
Lawrence,	J. A. Harris,	Mt. Vernon.			
Lewis,	P. F. Cole,	Steffenville.			
Lincoln,	W. R. Smith,	Troy.			
Madison,	S. C. Slaughter,	Fredericktown.			

### PASS THE HOSPITAL BILL.

Pass the hospital bill.

The disclosures published recently in a St. Louis newspaper depicting the horrors of baby farming in St. Louis, should arouse the medical profession in this city to press the passage of the bill, introduced in the Municipal Assembly by Health Commissioner Bond, to place all hospitals, homes, etc., under the control of the Board of Health. Under the provisions of this bill anyone wishing to establish a sanitarium, lying-in hospital, retreat, or institute of any kind for the care and treatment of the sick, or for pregnant women, must first obtain a permit from the Board of Health.

This bill, if passed, will effectually prevent the traffic in babies for it would be necessary to obtain a permit from the Board of Health to conduct such a place, which permit, of course, would be refused, and if operated without such permit the proprietor would be subject to punishment for a misdemeanor. It will also protect those unfortunate women who, forced to seek the privacy of a lying-in home, find themselves powerless to resist the influence of unprincipled persons to lead them further astray. The number of inmates of so-called homes and sanitariums who have been forced into a life of shame through the machinations of those who hold the secret of their lives, none will ever know. We have laws to protect girls and young women from the nefarious practices of the procurer; we have laws regulating child

labor; but the deserted, cast-off, babe is handed over to the merciless baby farmer who thrives unhindered by law or ordinance. Nor law nor ordinance protects the child.

The legislative committee of the St. Louis Medical Society should exert its influence to secure the passage of the hospital bill. Every medical society in St. Louis and every philanthropic society, should join with the St. Louis Medical Society and demand that the Assembly pass the hospital bill.

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### PUBLIC MEETINGS OF COUNTY SOCIETIES.

In another column we publish a letter from Dr. J. M. Allen, and, under county society notes, the report of the public meeting of Clay County Medical Society held on December 31, 1906. Dr. Allen's letter and the report from Clay County Medical Society will prove interesting and profitable reading. We commend them to the officers and members of all affiliated societies.

The average layman still thinks that the medical profession when it asks for certain legislation, does so for selfish reasons, or for the purpose of limiting the practice of medicine to "regulars." Until they can be convinced that all legislation emanating from the organized profession is wholly and entirely in the interest of the general public, irrespective of its influence upon the financial earnings of the physician as a practitioner, they will continue in this erroneous belief.

One of the chief objects of our organization is to educate the people in the principles of preventive medicine, insofar as these principles can be expounded to persons untrained in the science of medicine. Some special societies are doing much to enlighten the public in the care of the sick, particularly those afflicted with consumption, but the influence exerted by these societies is necessarily limited. If, however, each county society would designate a certain day as the time for holding a special meeting open to the public, there would soon be a very general awakening of the people, and a great desire to know more would grow upon them.

These meetings should be held all on the same day if possible, and the objects of the undertaking widely published by announcement in the county newspapers for several weeks prior to the date of the meeting. Further, if this work should be undertaken by all county societies throughout the whole country, the resulting influence would be far-reaching, permanent and powerful for good.

In addition to these public meetings, as suggested by Dr. Allen the county society could delegate a member to attend the meetings of school teachers within the county or district, to lecture on school hygiene and public health. Dr. Allen has found school teachers ready listeners to these lectures and eager to know all that could be of service in their work as teachers in the public schools. If properly instruct-



ed, school teachers would be of the greatest assistance in extending a general knowledge of the more important phases of school hygiene and the prevention of disease. In time, this system might become a part of the regular curriculum of our public schools, just as is done now in teaching drawing, music, and other special branches of learning, by giving lessons once a week in each school.

### THE ANNUAL MEETING.

Elsewhere in this issue will be found the preliminary program of the next annual meeting of the Missouri State Medical Association.

Letters have been addressed (by the Committee having the matter in charge) to each affiliated Society, requesting titles of papers, also to the medical schools of the state asking that a committee be appointed to prepare a pathological exhibit. A joint meeting of the committees will be held early in February and plans perfected.

The pathological exhibit will be a great addition to the annual meeting and that it will prove a success is beyond a doubt. The scientific work will probably be divided into three sections. First, General Medicine. Second, Anatomy and Surgery and Third, Eye, Ear Nose and Throat.

The business of the Association should be completed during the morning and afternoon of the first day and the formal opening should take place at eight o'clock in the evening.

All the sections should be called to order promptly at nine o'clock on the morning of the second day, as only in this way can sufficient time be devoted to the scientific program.

Jefferson City is the logical place for meeting, not only because it is the centre of the state but because the Capitol building furnishes suitable halls for the sections and pathological exhibit and has good hotel facilities.

The Cole County Medical Society constitutes the Committee of Arrangements, and all who attended the last meeting will take pleasure in recommending the doctors of the Capitol City as most gracious hosts.

### EXAMINATIONS FOR LICENSE TO PRACTICE.

The State Board of Health of Missouri will hold examinations for license to practice medicine, surgery and midwifery, simultaneously in Kansas City and St. Louis on April 16-17-18th, 1907. The examination of midwives will be on the morning of the 18th. In St. Louis the examination will be held in Barnes Medical College beginning at 9 a. m., and in Kansas City the examination will be held at Midland Hotel beginning at 9 a. m., April 16th. Application should be made to the Secretary thirty days before this examination as directed by Section 3 of House Bill No. 137, Session Acts of 1901, "All persons appearing for examination shall make application in writing

to the Secretary of said Board thirty days before said meeting." Each applicant will be assigned to one of these places and to save confusion he must by all means attend the place to which he is assigned; if in his application he designates a choice of places he will be assigned to that place, otherwise the Secretary will assign him to the place that appears to be the nearest or most convenient for him to attend.

### PRELIMINARY PROGRAM.

Next Annual Meeting, Jefferson City, May 14, 15, 16, 1907.

- J. M. Allen, M. D.....Liberty  
 "Tuberculosis a Communicable Disease."
- W. S. Allee, M. D.....Olean  
 "Duty of a Practitioner."
- W. M. Bayliss, M. D.....Columbia  
 "The State Sanitarium."
- G. A. Beedle, M. D.....Kansas City  
 "Carcinoma of the Breast."
- T. L. Bradley, M. D. ....Warrensburg  
 Title not announced.
- J. D. Brummall, M. D.....Salisbury  
 Title not announced.
- J. Robert Buchanan, M. D.....Nevada  
 "Some Reflections Concerning the General Practitioner."
- A. B. Burgwin, M. D.....Fayette  
 "The Duty of the Examining Surgeon for Life Insurance Companies."
- H. S. Crawford, M. D.....Harrisonville  
 "Attitude of the Public Toward the Doctor."
- R. O. Cross, M. D.....Kansas City  
 "Consumption and Civilization."
- H. E. Derwent, M. D.....Clinton  
 "The Eye and the Nervous System."
- F. Devilbiss, M. D.....Spring Garden.  
 "Local Medical Organization."
- T. H. Doyle, M. D.....St. Joseph  
 "Have We Any Infallible Signs, Symptoms or Methods by Which We  
 Can Diagnose Typhoid Fever Earlier Than the End of  
 the First Week?"
- H. E. Dunlop, M. D.....Canton  
 "Medical Education; Preliminary and Professional."
- Wm. Frick, M. D.....Kansas City  
 "Some Forms of Scabies Seen in Private Practice."
- C. E. Fulton, M. D.....Springfield  
 "The Surgical Treatment of Enlarged Prostate."
- C. G. Geiger, M. D.....St. Joseph  
 "Inguinal Hernia."
- O. G. Gleaves, M. D.....St. Joseph  
 "The Neglected Side of the Profession."

- C. B. Hardin, M. D.....Kansas City  
 "What We Have and What We Should Have of Medical Law Gov-  
 erning the Practice of Medicine."
- R. D. Haire, M. D.....Clinton  
 "Local Anesthesia."
- James Hanks, M. D.....Brashear  
 "Autointoxication."
- Geo. Homan, M. D.....St. Louis  
 "Sanitation and Tuberculosis."
- C. C. Leeper, M. D.....Braymer  
 Title not announced.
- P. I. Leonard, M. D.....St. Joseph  
 "The Tonsillar Ring as an Etiological Factor in Diseases of the Ear,  
 Nose and Throat."
- T. F. Lockwood, M. D.....Butler  
 "Medical Scraps."
- W. J. McGill, M. D.....St. Joseph  
 "Stricture of the Rectum."
- T. E. Potter, M. D.....St. Joseph  
 "Mastoid Abscesses and Their Sequellæ."
- William Porter, M. D.....St. Louis  
 "Civic Responsibilities."
- John Punton, M. D.....Kansas City  
 "A Plea for the State Care of Nervous Individuals."
- C. F. Roberts, M. D.....Kansas City  
 "A Few Points Relative to Prostatectomy."
- J. D. Seba, M. D.....Bland  
 "Tubercular Peritonitis."
- J. N. Scott, M. D.....Kansas City  
 "Present States of X-Ray Treatment of Malignant Growths."
- R. Winn, M. D.....Ilasco  
 Title not announced.
- L. M. Warfield, M. D.....St. Louis  
 "Early Diagnosis of Tuberculosis."





### DOCTOR AUGUSTUS V. L. BROKAW.

Doctor A. V. L. Brokaw died at his home in St. Louis on January 25th.

Doctor Brokaw was born in St. Louis in the Superintendent's room at the old City Hospital in 1863, his father, Doctor F. V. L. Brokaw, being at that time Superintendent of the institution. He was educated at the old Central High School and later graduated from the old Missouri Medical College.

He took a post-graduate course of one year in surgery and then went abroad, studying at the University of Berlin, the University of Vienna and other places.

Returning to St. Louis, Doctor Brokaw launched into the practice of his profession, and soon became professor of anatomy at Missouri Medical College. About this time also he became assistant physician at St. John's Hospital, a post which he held for seventeen years and was chief surgeon for six years. He was professor of clinical surgery in the medical department of St. Louis University, and a member of the following medical societies: American Medical Association, Tristate Medical Association, St. Louis Medical Society, Missouri State Medical Association, Southern Surgical and Gynecological Association.

Dr. Brokaw's manner was characterized by abruptness but the genuine candor and frankness of the man soon became apparent on acquaintance. To the poor and deserving he was notably charitable and his left hand never knew what his right hand did for those less fortunate than he. As a teacher he was clear and forceful and al-

ways had a strong following among his students. As a citizen he was easily interested in all enterprises that promised good to his city, and took great pride in its progress and growth. Among all classes he will be greatly missed because ever a friend to the weak and a helpful ally to those strong in purposes for good.

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### CORRESPONDENCE.

Liberty, Mo., January 5, 1907.

To the Editor Journal of the Mo. State Medical Assn.:

For the last twenty-five years, I have been urging our State Medical Society and County Medical Society, that the greatest need of our people was proper education along the lines of State Medicine and Public Hygiene, asserting that when that is done, there will be no difficulty in securing all the legislation and appropriations that we need to forward this noble humanitarian idea of public health.

For the purpose of reaching the people so that they could be efficiently educated, I have often recommended that County and District Medical Societies should hold one public meeting annually, similar to the meeting held by the Clay County Medical Society, December 31st, 1906, inviting all the people, ladies and gentlemen, to attend. A further and more direct way of educating the people is through the teachers of the public schools, thus reaching every nook and corner in the state. To accomplish this end, a competent physician in each county should be selected by the county societies to deliver an address on public and school hygiene to the teachers, at their institutes in the county, or at their meetings which occur annually. I have addressed a great many of these meetings, and have always found the teachers more than ready to listen to addresses on these subjects; indeed, they have invited me many times. From these meetings they go to every school district in the county, and come directly in contact with the people. Being friends of public health and school hygiene they disseminate these ideas. Besides this, it enables them to lecture to their pupils in the schools.

If these plans were adopted throughout the state, or I might say throughout the United States, it would bear a rich harvest; our boards of public health would then have only to ask for legislation and appropriations. The people are always ready to direct their officers on any subject they understand. It cannot be expected that they would demand legislation and appropriation of money for something they know nothing about. Therefore, the fault of not having such legislation and appropriations as we require for the reforms so badly needed, lies at the door of the physicians of the state.

Respectfully,

J. M. ALLEN, M. D.

## COUNTY SOCIETY NOTES

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### BENTON COUNTY MEDICAL SOCIETY.

The first meeting in 1907 was held at Lincoln on January 8th.

Our district councillor, Dr. Robert D. Haire of Clinton, was present and favored the Society with a paper on the subject of "County Organization." This was a very interesting essay and received much favorable comment from the members.

Doctors Rhodes and Jones each presented a case for examination, both of which proved very interesting and brought out considerable discussion.

Dr. Rhodes was on the program to read a paper on "Abortion," but as the entire time had been consumed in discussing other subjects, he was requested to present his paper at the April meeting.

The next meeting will be held at Warsaw, April 9th.—W. G. Jones, Secretary.

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### BUCHANAN COUNTY MEDICAL SOCIETY.

At the last meeting of this Society an interesting Symposium on Pneumonia was presented, as follows: Etiology and Symptoms. Dr. A. L. Gray; Diagnosis and Prognosis. Dr. B. W. Toothaker; Treatment, Dr. J. F. Owens. Dr. A. E. Timmerman read a paper on "Concussions of the Abdomen," reporting a unique case.

Dr. J. H. McCoy and Dr. J. K. P. Bowen were elected to membership. Sixteen additional applications for membership were presented, owing to the energetic missionary work being done in this field by Mr. C. H. Roney, the representative of the A. M. A.

The subject of insurance examination fees came up for discussion, and it was the consensus of opinion that the fee of \$5 for medical examination was just and fair. After some discussion a resolution was adopted, similar to the Kentucky form, and all members agreed to stand by the decision of the American Medical Association in this matter.

The Society expressed itself in hearty sympathy with the amendments being offered to the various medical bills at Jefferson City, and pledged itself to cooperate with the State Legislative Committee in the interests of the profession. Dr. Chas. Wood Fassett was elected to represent the Society in legislative affairs. The Committee on Organization reported that progress was being made, and that a call for a meeting would be issued shortly by Dr. W. T. Elam, councillor,



for the organization of a medical society of the Seventh Councillor District.

The newly-elected officers of the Society are: President, Dr. O. G. Gleaves; Vice Presidents, Dr. S. F. Kessler and Dr. W. J. McGill; Treasurer, Dr. J. M. Bell; Secretary, Dr. Chas. Wood Fassett; Censor, 3 year term, Dr. T. E. Potter; Delegate, Dr. T. H. Doyle; Alternate, Dr. O. B. Campbell.

President Gleaves appointed the following committees for the year: Public Health and Legislation; Drs. J. W. Ferguson, Chas. Wood Fassett, L. C. Bauman. Executive; Drs. F. A. Patterson, A. L. Gray, W. J. McGill; Program, Drs. Wood Fassett, W. T. Elam, J. F. Owens.—CHAS. WOOD FASSETT, Secretary.

#### BUTLER COUNTY MEDICAL SOCIETY.

The regular session was held on December 28th at Poplar Bluff, Dr. Alfred R. Rowe was received as a member on transfer card from the St. Louis Medical Society.

No scientific papers were read at this meeting and after the transaction of routine business, officers were elected for the year 1907 as follows: President, C. F. Green; vice-president, J. J. Norwine, secretary, A. R. Rowe; treasurer, C. B. Jones.—J. W. Mott, Acting Secretary.

#### CALLAWAY COUNTY MEDICAL SOCIETY.

This society met on January 10th and elected the following officers for 1907: President, G. F. Roots, Tebbetts; 1st vice president, J. T. Moore, Fulton; 2nd vice president, H. I. Owen, Fulton; secretary and treasurer, J. F. Harrison, Fulton.

The roads in our county are in such bad condition that it is practically impossible for the members in the country to attend; for that reason the society was adjourned to meet April 10th.—J. F. HARRISON, Secretary.

#### CAPE GIRARDEAU COUNTY MEDICAL SOCIETY.

The following resolutions were adopted at the last meeting:

*Whereas*, The widespread use of patent and secret medicines has become a serious menace to the people of our country and

*Whereas*, It has been credibly reported that a number of large pharmaceutical manufacturing firms that make standard preparations for the medical profession also prepare, for the exploiters, many of the dangerous proprietary and patent medicines, and

*Whereas*, Small pharmaceutical firms have been dispensing and prescribing poisonous and non-poisonous preparations, *ad libitum*, contrary to the powers so given them by the present statutes, and

*Whereas*, The same class of pharmaceutical establishments have and are, at times, using cheap, adulterated and substitution products,

violating the confidence that the physicians place in them, dangerous to the people, derogatory to the dignity and welfare of the profession, and an aid and encouragement to quackery.

*Therefore, be it Resolved*, That we endorse the action of the committee on public health and legislation in preparing bills to remedy such evils as that of the nostrum and patent medicine, also their effort to get the General Assembly to pass a bill for an appropriation to maintain the Missouri State Board of Health; also any new measures regulating the practice of medicine, surgery and obstetrics, as approved by the State Medical Association; and that we also endorse the St. Louis Medical Society, also its efforts to suppress the crime of criminal abortion, also the action of the Missouri State Board of Health, in its endeavors to check the latter evil, also commend the Health Board, the Dental Board, and Pharmacy Board, for their activity in prosecuting the violators of the laws pertaining to their respective branches, as the laws exist at the present time, and to the end that we may elevate our profession and eradicate charlatanism.

*Be It Further Resolved*, That the Cape Girardeau County Medical Society ask our County Representative and Senator, from this District, to give their aid and support to such measures as will tend to suppress and eradicate such evils.

G. W. VINYARD,  
R. F. WICHTERICH,  
H. L. CUNNINGHAM,  
E. H. G. WILSON,  
Committee.

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#### CARROLL COUNTY MEDICAL SOCIETY.

Carroll County Medical Society held its regular meeting January 9th. Eleven applicants for membership were approved and on ballot were elected. To these new members the society extends a hearty welcome, and cordially invites each one to attend every meeting and endeavor to make the meetings more profitable and more interesting during the new year than ever before. Your county society is what you make it.

Three communications of vital importance to the society and to the medical profession in general were read and discussed.

This being the time for the annual election of officers, the following were elected: President, W. C. Baird, Bogard; vice-president, Dr. Cooper, Carrollton; secretary, R. F. Cook, Carrollton; reporter, R. M. Miller, Bogard. After election of officers some time was spent in reporting cases and a general discussion of the same.

Dr. R. F. Cook, with Dr. Highsmith alternate, was appointed delegate to confer with the committee on Public Health and Legislation. The next meeting will be held at Carrollton, on February 13th.  
—R. M. Miller, Reporter.

## CASS COUNTY MEDICAL ASSOCIATION.

The first regular meeting of the Cass County Medical Society, for this year was held in Harrisonville, January 3rd.

The weather was cold and stormy and the roads muddy, but the attendance was far better than was expected.

Physicians are beginning to realize that the man who does not attend his local medical meetings whenever possible will soon be left behind.

Our newly elected President, H. A. Brierly of Peculiar, was present and read his paper on "Pneumonia up to Date" which produced one of the warmest and most profitable discussions ever heard in our Society. The old ideas of pathology, etiology, prognosis and treatment were brought face to face with the newer and more recent ideas and in view of the increased death rate from this disease the older practitioners seemed to have the best of the argument, viz.; Treat the patient—then hydrag. mite doveri and quinine.

This one subject was so decidedly interesting that other business up for consideration had to be hurried through.

The question of fees for insurance examinations is rapidly being settled by the circulation of resolutions for signers thereto, either in or out of the society. The paper is still going the rounds and seems to be meeting with success which will be reported to our State Secretary as soon as possible.

H. S. Crawford, of Harrisonville, was selected to read a paper at our next meeting preparatory for reading at the State meeting in Jefferson City, in May.

The Secretary and Reporter was tendered a complimentary vote of dues for the year paid by the society.

Those who took an active part in the discussion were J. S. Triplett, R. D. Ramey, G. M. Anderson, H. S. Prentiss, A. R. Elder, D. W. Conger and H. S. Crawford.

The Secretary made his report for last year.—W. F. CHAFFIN, Reporter.

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CHARITON COUNTY MEDICAL SOCIETY.

Regular meeting was held in Salisbury on January 27th.

A communication from the State Secretary was read in which it was urged that the county societies co-operate with the State Society in an effort to secure needed reforms in laws governing criminal abortion, and draft of the new law was read. Doctors Welch and Brumhall were appointed a committee to wait upon our county representative and Senator Fields, and request them to support the measure.

The following physicians were elected to membership: Doctors T. Banning, W. T. Todd, G. W. Lawhorn and Jno. W. Hardy.

Officers for the year 1907 were elected as follows: President,



Oliver McEwen; vice-president, G. W. Hawkins; second vice-president, R. G. Epperly; secretary-treasurer, C. A. Jennings; legislative representative, M. B. Austin; reporter, C. A. Jennings; delegate, Oliver McEwen. Representing the Society on the program of the next meeting of the State Association, Dr. J. D. Brummall; Censors; J. D. McAdam, C. H. Temple, H. C. Tatum.

The Society then adjourned and the members gathered around festive board prepared for their entertainment, and while indulging in material pleasures promised their support to the work of the Society during the coming year. The meeting was characterized by a general feeling of good fellowship and enthusiasm in the aims and objects of the Association.—C. A. JENNING, Reporter.

### CLAY COUNTY MEDICAL SOCIETY.

The Clay County Medical Society held an open session in the Court House at Liberty, December 31st, with Dr. Haney Rowell in the chair and Dr. F. H. Matthews, secretary. The following members were present: Drs. E. H. Miller, John Rothwell, J. M. Allen, R. E. Sevier, J. T. Marsh, J. J. Rice and L. J. Jones.

To this meeting the public was invited. The court room was well filled during the day with good citizens, ladies and gentlemen.

The first paper, "Massage—Its Benefits and Injuries," by Dr. F. H. Matthews, was brief but pointed. He claimed that it is almost as old as civilization; that, when it is scientifically directed by a physician who thoroughly understood anatomy, pathology and physiology, it could be made a very beneficial and useful factor in medicine, but, if directed by ignorance, it could be made not only very injurious but dangerous to life; because it would cause the transferring of a disease through absorption by the lymphatic gland and carried to internal vital organs. He illustrated this in cases of tuberculosis of the joints and bones being transferred by massage to the internal vital organs. This subject was also discussed by Drs. J. J. Rice and J. M. Allen.

The next paper was "Hygiene of the Public School," by Prof. E. C. Hamilton, Superintendent of the Liberty Public Schools. This was a strong well-written paper, pointing out many of the defects in our public school system and the great necessity of legislation to remedy these defects. The discussion on this subject was opened by Miss Mary Jean White, of Harrisonville, School Commissioner of Cass County. Miss White has been superintendent of some of the best public schools in the state, and is familiar with the law relating to public schools and the practical side of public hygiene. Her address was delivered in an easy and graceful manner and was well received and complimented very highly.

Prof. H. G. Parker, of William Jewell College, delivered the next address on "Pure Water." He, like all speakers who thoroughly understand their subject, made it easy to be understood, and the full force

of benefits that might be derived from this knowledge was made so plain that a child could have comprehended. He showed that the dust of the air contained many disease producing germs. These are blown by the currents of wind and find lodgment on the house, then to be washed by the first rain into the cistern, unless the water was turned off until the roof was thoroughly drenched. He spoke also of the great importance of keeping the cisterns well cleaned out and well disinfected by various gases that are germicidal. It was further said that people who use wells, and the public schools in the country, should have these wells walled up with brick laid in Portland cement for at least ten feet in the ground, and the outside cemented or covered with Portland cement. This would practically protect the well from surface water which often contains the germs of epidemic diseases, as well as the germ of consumption.

The next address was by Dr. Herman E. Pearse, of Kansas City, on "State Medicine." Dr. Pearse has given a great deal of time to the study of public health. He touched upon the pure food question and pointed out the vile compounds of food that are sold to the public, and urged that our legislature pass a rigid pure food law. He then pointed out clearly and forcibly the laws needed to give to the Board of Health the police power necessary to protect the people from the ravages of epidemic diseases, also legislation to guarantee to the people competent physicians.

The next speaker was Dr. E. H. Miller on "Hygiene of Small Towns." This paper covered the field thoroughly and well. Each town in the county would be benefited by having a copy of it and rigidly adhering to the doctor's advice.

The next paper, "National Medicine," was discussed by Hon. Joshua Alexander, who, in a most forcible manner demonstrated the limits of the authority of the National Government in meddling with the state affairs. Yet, he believed that a department of Public Health, similar to the department of Agriculture, presided over by a distinguished physician, to be one of the president's family or a secretary, would be a great benefit, and would further the interest of public health, as well as the health of the army and of the navy.

This discussion was followed by a talk from Dr. J. E. Cook, who expressed great admiration for the work that is being done by the medical profession in the interest of public health and thought they ought to have the united support of every citizen in the state. Dr. Cook stated that there was no parallel in any of the professions, or in any of the commercial pursuits, to the action of the regular medical profession in their noble effort of attempting to decrease the amount of sickness, thereby, decrease the amount of their individual revenue. Further, that all we know of hygiene or how to protect our health, we get alone from the regular medical profession and nowhere else.

Rev. F. V. Loos followed Dr. Cook in which he gave a graphic

description of his experiences as a member of the Board of Public Charity of the state, urging as a necessity of making ample legislation so as to give the board of public health the power to be efficient in controlling the ravages of epidemic diseases.

The next speech was by Hon. D. C. Allen, in which he referred to the efficiency of the Japanese army as largely the result of their thorough knowledge of the laws of hygiene and the rigid enforcement of them. This should be an object lesson to us, that is, the enforcement of all the present laws relating to hygiene; and, as the country becomes more densely populated, new laws will have to be made to meet the emergencies. Further that the duty of the medical profession and the school teacher to educate the people along the laws of hygiene. People once educated on any subject always do the right thing.

The gentlemen who took part in the discussion of the various questions were Dr. H. E. Pearse, of Kansas City, Dr. E. H. Miller, Dr. J. J. Rice of Kearney, Dr. J. M. Allen, Prof. Hamilton, Rev. F. V. Loos, Dr. J. E. Cook, D. C. Allen and Dr. L. J. Jones.

This is the third open session of the Clay County Medical Society, the objects of which have been educational to the public and to the teachers of our public schools. We are very glad that so many of our citizens attended the meeting and gave such profound attention to everything that was said. That it was intensely interesting to them and the medical profession, there can be no question. Therefore, we infer it will be of large benefit to the citizens of the town and county.

Telegrams of regret were received from Dr. F. J. Lutz of St. Louis and Dr. C. Lester Hall of Kansas City, because of their inability to be present.

At the conclusion of the meeting, the following resolution was introduced by Dr. J. M. Allen:

*Resolved*, That it is the wish of all present that our Representative of this county and Senator of this district be requested to lend their aid to secure the passage of such legislation in the interest of Public Health and School Hygiene as may be recommended by our State Board of Health and Superintendent of Public Schools; and make such appropriations as will render said board efficient in controlling the ravages of epidemic diseases.—J. M. ALLEN, Chairman.

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#### CLINTON COUNTY MEDICAL SOCIETY.

A called meeting convened in Plattsburg on December 20th with a good attendance of the members. This is the first meeting we have held for several months, but we anticipate that regular meetings will be held in future. The following officers were elected for 1907:—President, John Sturgis, Perrin; vice-president, G. B. Rusk, Lathrop; secretary-treasurer, E. A. Colley, Plattsburg; delegate to State Association, J. A. Franklin, Cameron; board of censors, Robt. W. Rea, 1907; John Kay, 1907-8; J. A. Franklin, 1907-8-9. The applications of the



following physicians were received and referred to the board of censors for report at the next meeting: Thomas Doran, Trimble; Archibald Robertson, Lathrop; John Brown, Cameron; Jesse Longfield, Turney; Melvin L. Peters, Cameron; John T. Kinsey, Lathrop; Harry E. Desmond, Plattsburg.

MEETING OF JANUARY 1, 1907.

Clinton County Medical Society met in regular session January 1st, 1907, with a fair attendance of members. The regular order of business was suspended to receive the report of the Board of Censors which resulted in Dr. M. L. Peters of Cameron and Dr. Jesse Longfield of Turney being taken in as members of this society.

Dr. R. W. Rea, read a paper on erysipelas which was concise in regard to history and was discussed by Dr. J. A. Franklin who gave his treatment.

Dr. John Sturgis, gave his third inaugural address, which was on the "Code of Ethics."

The next meeting will be held in Plattsburg, February 5th.—E. A. COLLEY, Secretary.

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COOPER COUNTY MEDICAL SOCIETY.

The Cooper County Medical Society met in Boonville on January 8, 1907, eight members being present.

Dr. Hurt reported a case of varicella which had been atypical in many respects; a case which had caused some doubt and alarm in the neighborhood on account of its resemblance to smallpox. The discussion of this case and similar ones occupied an hour or two and brought out much that was of interest.

The annual election of officers resulted in the following: President, Dr. F. R. Smiley; vice pres., Dr. C. H. VanRavenswaay; sec-treas., Dr. Jno. R. Lionberger; delegate, Dr. R. L. Evans; censor for three years, Dr. J. R. Lionberger.

The name of Dr. A. W. Nelson being reported favorably by the board of censors the society proceeded to a vote and Dr. Nelson was elected.

Dr. O. W. Cochran read the proposed amendments touching criminal abortion and admission of evidence. Upon motion the President appointed Dr. O. W. Cochran a committee of one to interview the representative of Cooper County in the General Assembly and ascertain whether he would aid in the passage of the bill.

Next meeting will be held on the first Tuesday in February.—JOHN R. LIONBERGER, Secretary.

## GREENE COUNTY MEDICAL SOCIETY.

MEETING OF DECEMBER 28, 1906.

The regular meeting of the society was held at Springfield, December 28.

Dr. J. E. Tefft resigned as a member of the board of censors and Dr. J. C. Matthew was elected to fill this unexpired term of office.

The president appointed a committee to examine the proposed amendment to the state law in regard to criminal abortion.

Drs. E. G. Beers, J. W. Clark, T. U. Crane, M. H. Mayfield, S. W. Tickle of Springfield and Drs. L. E. McClure and J. K. Perry of Walnut Grove, were elected to membership in the society.

MEETING OF JANUARY 11, 1907.

This being the annual meeting the out-going officers made their reports. The secretary reported thirty-seven active members. The society lost by death during the year 1906, one of its most faithful and honored members, Dr. John H. Fulbright. The meeting night has been changed to the second and fourth Friday nights in each month, except during the month of August. The treasurer reported all debts paid and some cash on hand.

Dr. J. R. Boyd was elected president; Dr. T. A. Coffelt, vice president; Dr. J. L. Ormsbee, secretary; Dr. D. B. Farnsworth, treasurer; Dr. Lee Cox was re-elected a member of the board of censor, for three years.

Drs. Wm. Rienhoff, C. Bryant Elkins and U. F. Kerr, were elected to membership in the society. Several applications for membership have been presented with promises of more to follow. The prospects for increased membership and interest in medical association work in Greene County is very good.—J. L. ORMSBEE, M. D., Secretary.

## HOWARD COUNTY MEDICAL SOCIETY.

The regular meeting was held at Fayette on January 4th. Dr. C. H. Lee was appointed to act in conjunction with the State Board of Health and the Committee on Public Health and Legislation in response to communications from the chairman of the State Committee.

Doctors Lewis and Wright reported a case of gun-shot wound.

On motion, the president appointed a committee consisting of Doctors Burguin, Wright and Richards to prepare an appeal to the Governor in behalf of Dr. Todd.—C. W. WATTS, Reporter.

## JASPER COUNTY MEDICAL SOCIETY.

MEETING OF DEC. 17TH, 1906.

The regular meeting was held in Y. M. C. A. parlors. Fifteen members present.

Dr. Lanyon read a paper entitled, "Gonorrheal Infection." This

was freely discussed by many members present.

Doctors A. B. Clarke, M. B. Hornton, W. H. Mallory and A. O. McMichaels were elected to membership.

Dr. L. I. Matthews read a communication from United Pure Food Committee from Missouri and moved that the society endorse the proposed pure food bill and ask our Representatives and Senator in the State Legislature to use all favorable means to have it become a law. This motion was adopted.

Dr. L. I. Matthews was appointed a member of the Auxiliary Committee of the State Committee on Public Health and Legislation.

The following officers were elected for year 1907: President, C. M. Shelton; vice president, J. W. Clarke; secretary, R. M. James; treasurer, G. W. Miller; censor, W. H. Lanyon.

#### MEETING OF JANUARY 7TH, 1907.

The annual meeting of the society was held in Y. M. C. A. parlors. All members of the society were present.

Dr. J. F. Binnie, of Kansas City, Mo., guest of society, read a very able and instructive paper on the "Prophylactic Treatment of Traumatic Epilepsy."

Dr. Binnie, after thoroughly reviewing the causes of mental disturbances following injuries to the head, proved by statistics that the best results were obtained when the defect in the cranium was closed with some hard substance, preferably bone. This closing of defect in cranium should be done at primary operation following the injury when possible; if not, a secondary operation for that purpose should be performed. Discussion was general by members of the society, Dr. Binnie closing. Moved and seconded that Dr. Binnie have his paper published in STATE JOURNAL, if agreeable to him. Moved and carried that a vote of thanks be tendered Dr. Binnie for his address.

The society then adjourned to the Olivia apartments where a banquet was served. Forty covers were laid. After partaking of the many good things to eat and drink, the following toasts were responded to: "The President of the U. S.," by Dr. J. D. Pifer; "The A. M. A.," by Dr. L. I. Matthews; "The County Medical Society," by Dr. C. M. Ketcham; "The Country Doctor," by Dr. W. E. Steele; "Our Guest," by Dr. S. A. Grantham. Dr. Binnie then responded in his usual amusing and instructive way.

#### MEETING OF JANUARY 21ST, 1907.

The regular society met in regular session in Y. M. C. A. parlors at 8 p. m. The secretary, R. M. James, was reported to be sick in St. Louis, and R. L. Neff was appointed secretary for the evening. Eleven members of the society were present.

Dr. Z. T. Blackwell presented a patient suffering from eczema



rubrum, eruption covering nearly the entire body; diabetes mellitus was also present.

Dr. R. S. Kelso read a very exhaustive paper on "Pott's Disease." Discussion was general. - The treasurer's annual report was read, showing \$53.40 cash on hand.

Dr. W. H. Lanyon reported that one Dr. Brays, of Webb City, Mo., claiming himself to be a cancer specialist, was not registered in county. Moved and carried that Dr. Lanyon file information against Dr. Bray before the county prosecutor.

Dr. Lanyon presented to the society a very ingenious apparatus for binding and filing medical journals.

Dr. E. E. Wutke, of Duenweg, asked for a transfer to Harvey County, Kansas Medical Society, as he expected to move there.—R. M. JAMES, Secretary.

### JOHNSON COUNTY MEDICAL SOCIETY.

MEETING OF SEPTEMBER 11, 1906.

A resolution adopted by the Judicial Council was read. This resolution was a request that county societies accept new members on this date and credit them with membership until January, 1908, on payment of dues for the year 1907. This resolution was approved and adopted.

Communication from Dr. Overholser, councillor for the district, regarding our political responsibilities, was read and received.

A resolution was introduced favoring the publication of our roster of membership in some newspaper in the country, and after considerable discussion was adopted. A committee consisting of the President and Secretary was appointed to carry out the objects of the resolution at such time as they decided would be for the best interest of the society.

Dr. J. A. Adcock read a paper entitled "Some Needed Legislation." He pointed out the defects under our present laws and read the amendments, which were to be introduced in the Legislature. The Society approved the proposed amendments.

Dr. John T. Anderson of Cornelia presented a very interesting clinical case of Exophthalmic Goitre.

MEETING OF DECEMBER 12, 1906.

This was our annual meeting and the business of the year was reviewed, reports received from the officers, and new officers elected for 1907. Three applications for membership were presented and referred to the board of censors for report at the next meeting.

A resolution in regard to fees for examinations for life insurance was read and its provisions endorsed by the Society.

On motion Dr. T. L. Bradley was appointed to read a paper at the next meeting of the State Association.

Dr. N. J. Raines of Knobnoster, having moved to Kentucky was upon his request granted a transfer card showing him to be in good standing with this Society, and recommending his admission to the local society of the town in which he will locate in Kentucky.

Officers for the year 1907 were elected as follows: President, L. J. Schofield, Warrensburg; vice-president, W. G. Thompson, Holden; secretary, E. H. Gilbert, Warrensburg; treasurer, O. B. Hall, Warrensburg; board of censors: Z. Case, Warrensburg, W. H. Aber, Montserratt; J. T. Anderson, Cornelia.—E. H. GILBERT, Reporter.

#### LAWRENCE-STONE COUNTY MEDICAL SOCIETY.

At a special meeting of the Lawrence-Stone County Medical Society, the following resolutions were endorsed:

*Resolved*, That we have read the proposed pure food law and discussed the merits and demerits of the bill, and that we hereby give our endorsement to the same. Should it become a law, we believe it will have a most salutary effect in ridding the state of a great many evils now practiced in food and drug adulterations.

*Resolved*, Further that we recommend that three thousand dollars be fixed as the salary of the commissioner instead of two thousand as proposed in the bill.

*Resolved*, Further that we instruct our Secretary to furnish the State Senator of the 18th Senatorial District, our County Representatives to the Legislature, and the Secretary of the State Board of health with a copy of these proceedings.

*Resolved*, That we urge our State Senator and County Representatives to give their support to the bill. By order of the Society.

C. A. MOORE, Secretary,

F. S. STEVENSON, President.

#### NODAWAY COUNTY MEDICAL SOCIETY.

At the regular Annual Meeting of the Nodaway County Medical Society, held in Maryville, Mo., January 8, 1907, the following officers were chosen for 1907: President, F. R. Anthony, Maryville; vice-president, Wm. Wallis, Maryville; secretary, H. L. Sayler, Elmo; treasurer, J. H. Todd, Maryville; delegate, F. R. Anthony, Maryville.

Dr. Anthony, president, and Dr. Sayler, secretary, were elected to succeed themselves, this being the third year for the former and the second year for the latter in their respective offices.

Committees appointed for 1907 were: "Program and Scientific Work,"—H. L. Sayler, Elmo; E. L. Crowson, Pickering; D. A. Sargent, Hopkins. "Social Entertainment"—A. B. Allen, F. C. Wallis, and J. H. Todd: Maryville. "Legislation"—G. A. Nash, and L. E. Dean of Maryville; M. M. Pollard, of Barnard.—H. L. SAYLER, Secretary.

## PETTIS COUNTY MEDICAL SOCIETY.

The Pettis County Medical Society held its annual banquet January 4th at the Falstaff Hotel in Sedalia. There were twenty-three members present and the banquet was thoroughly enjoyed by all. It consisted of ten courses. The management of the Falstaff Hotel deserves much credit for the manner in which the banquet was served. Drs. W. G. Cowan, S. G. Kelly and Frank R. Morley, constituting the Committee on Arrangements, received much praise for the success of the banquet.

The following program of toasts was carried out, with Dr. E. F. Yancey as Toast Master: "X-Rays," Dr. M. T. Collins. "Then and Now," Dr. I. T. Bronson. "Specialism," Dr. F. L. Sutton. "Apropos," Dr. W. H. Evans. "Not Yet but Soon," Dr. W. S. Shirk. "Prognosis," Dr. W. J. Ferguson.

The address of Dr. W. H. Evans, the oldest member of the Society, was an event of special pleasure to all.

## MEETING OF JANUARY 7TH.

Pettis County Medical Society met in regular session January 7th, at Maywood Hospital.

The following program was carried out in the regular meeting: "Acute Intestinal Obstruction in Adults," by Dr. E. F. Yancey. "Acute Intestinal Obstruction in Children," by Dr. Minerva Knott. "Chronic Intestinal Obstruction," by Dr. W. O. Dunlap.

The discussion was taken up by the doctors present and several good points brought out, the early surgical interference being especially dwelt on.

The new officers for 1907 were installed as follows: President, Dr. S. G. Kelly; Vice President, Dr. David P. Dyer; Secretary, Dr. Guy Titsworth; Treasurer, Dr. W. G. Cowan; Reporter, Dr. F. R. Morley; Board of Censors, Drs. W. J. Ferguson, H. B. Cole, and W. C. Overstreet; Delegate to State Society, Dr. W. J. Ferguson.

After the meeting adjourned the members and their wives, were entertained by Dr. and Mrs. Wood and the Maywood Hospital nurses.

## MEETING OF JANUARY 21ST.

Pettis County Medical Society met January 21st, and the following program was rendered:

## SYMPOSIUM ON PNEUMONIA.

Diagnosis, Dr. W. J. Ferguson. Pathology, Dr. H. B. Cole. Treatment, Dr. E. A. Wood.

Discussion by all the doctors present.

We now have forty-two members and we are having very interesting meetings.—FRANK R. MORLEY, M. D., Reporter.



## PIKE COUNTY MEDICAL SOCIETY.

The next meeting will be held at Clarksville on February 4th. Following is the program of the evening which should prove of very great interest to all the members: "Membranous Croup," by Dr. Byrns; "La Grippe" by Dr. Walters; "Vomiting of Pregnancy" by Dr. Hereford; "Prophylaxis of Infection" by Dr. Dreyfus.—Dr. R. G. Hereford, Secretary.

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## PLATTE COUNTY MEDICAL SOCIETY.

The regular monthly meeting of the Platte County Medical Society was held in Platte City, Wednesday, January 2, 1907.

Dr. Redman, the newly elected president, delivered a short address, outlining the work for the year. He stated that he was trying to arrange an interesting and instructive programme. He assigns the subject several months in advance and if a man fails to read his paper at that time he will not be carried over until next month, but each month will have its own program.

Dr. Chastain presented his paper on "Indigestion." This paper was discussed freely by Drs. Herndon, Naylor, Redman, Shafer and Mizner.

Dr. Herndon opened the discussion on "Puerperal Lacerations of the Cervix Uteri," which was very interesting as well as instructive.

Dr. Naylor read a paper on "Tuberculosis," which brought forth a liberal discussion.

The Secretary was instructed to draft resolutions in regard to the Pure Food bill and Abortion bill and to send a copy of same to our representative.

Dr. C. E. Benham, of Parkville, was elected to represent our Society on the Auxiliary Committee of the State Committee on Public Health and Legislation.

Adjourned to meet in Platte City, on the 1st Wednesday in February, 1907.—G. C. COFFEY, Secretary.

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## SCOTLAND COUNTY MEDICAL SOCIETY.

At the annual meeting held in December the following officers were elected for 1907: President, W. E. H. Bondurant, Memphis; vice-president, A. J. Shacklett, Rutledge; secretary-treasurer, A. E. Platter, Memphis; The board of censors: Drs. Baker, Johnson, Maynard; committee on Public Health and Legislation, Drs. Pile, Petty and Davis; Committee on Tuberculosis, Drs. Edelen, Foster, and Alexander.—O. F. PILE, Reporter.

## ST. GENEVIEVE COUNTY MEDICAL SOCIETY.

The St. Genevieve County Medical Society held its regular monthly meeting January 9, 1907. The application of Dr. Edward Ford, River aux Vases, for membership was reported favorably by the board of censors.

Doctors Wilkins and Rutledge were appointed to prepare papers for next meeting.

The president appointed as member of the Committee on Public Health and Legislation, Doctors H. J. Morganstein, C. J. Hertich and J. A. Wilkins.

The next meeting will be held on the second Wednesday in February at St. Mary's.—R. W. LANNING, Secretary.

## STODDARD COUNTY MEDICAL SOCIETY.

The Stoddard County Medical Society held its regular bi-monthly meeting at Dexter on Wednesday January 2, 1907. Owing to the stormy weather and the bad roads only two of the members outside of the local Doctors were present, viz., T. C. Allen of Bernie and W. B. Kerr of Dudley.

After the routine business of the Society was transacted Dr. T. C. Allen led in a discussion of Sec. 3. Chapter 2 of the by-laws.

Dr. I. B. Wingo presented two cases of equino varus which he had corrected, one by a plaster cast the other by adhesive plaster cast. Both cases were fully discussed after which the Society adjourned to the Jefferson Hotel for dinner.

The Society reconvened at 1:30 p. m. Dr. Slayden read a paper on "Pneumonia in the Adult," and Dr. Vernon contributed a paper on "Bronchial Troubles of Children." Both papers were discussed at length by all present.

The Society will hold its next meeting at Bloomfield, the 1st Wednesday in March.—GEO. W. VERNON, Reporter.

# JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

Volume III

MARCH, 1907

Number 9

## ORIGINAL ARTICLES

### DEEP RECTAL ABSCESES.\*

BY J. M. FRANKENBURGER, M. D., KANSAS CITY, MO.

The subject of rectal abscesses being such a vast and unlimited one, I will not treat of the more common varieties but confine my paper to the rarer kind known as deep abscesses, or as they can better be named anatomically, retro-rectal abscesses and superior pelvi-rectal abscesses. And in order that an intelligent idea may be had of them, it is well to briefly review the anatomy of the parts involved.

Between the levator ani and the peritoneal attachment of the rectum are three cellular spaces in which ramify the blood vessels, nerves and lymphatics before they enter the rectum. The lateral ligaments of the pelvic portion of the rectum, which are the principal supports of the rectum, originate at the points where the lateral sacral arteries diverge and attach themselves to the sides of the rectum. The space thus formed between the rectum and sacrum is termed the retro-rectal space. Anteriorly the prostato-peritoneal aponeurosis, which is closely attached to the prostate, passes backwards over the seminal vesicles and is attached to the sides of the rectum with the ligaments of the pelvic rectum. It is also attached to the anterior wall and divides this space into two parts. These are called the superior pelvi-rectal spaces, and separate the rectum from the bladder, prostate and seminal vesicles in the male, and from the broad ligaments and uterus in the female. These spaces are all separate and distinct from each other, being separated from the ischio-rectal fossa by the levator ani muscle and its limiting fascia.

Retro-rectal abscesses, or those originating between the rectum and the sacrum, may be caused by neurosis of the sacrum, coccyx, or ilium, by injuries to the rectum, or more frequently by internal proctotomy where the drainage is of necessity incomplete.

The symptoms of these abscesses are very different from those of ordinary rectal abscesses, inasmuch as they are nearly always of slow origin, and are not associated with a distinct chill and such

\*Read by title at the Annual Meeting, Jefferson City, May, 1906.



pronounced constitutional disturbances as accompany ordinary ischio-rectal abscesses. There will be a heavy dragging feeling in the region of the sacrum, slight elevation of temperature, and the patient will have the cachexia peculiar to the people with a slow chronic suppuration in any other part of the body. Upon examination of the rectum with the finger, a boggy mass will be felt in the hollow of the sacrum. At first no fluctuation will be apparent and when this is present, the abscess may burst at any time either into the rectum or through the levator ani into the ischio-rectal fossæ. The treatment of these cases is early incision and drainage. An incision sufficiently large to produce complete drainage should be made, the abscess cavity washed out with a formaldehyde solution and two long drainage tubes inserted; these drainage tubes may be pinned to the edges of the incision with safety pins. The abscess cavity should be irrigated once or twice daily and the patient should be encouraged to keep out of bed as much as possible as the upright position facilitates drainage.

An interesting case of this type of abscess recently came under my care: Mr. W., suffering from a chronic ulcerative colitis, complained of constant pain in the region of the sacrum, but as this is a common symptom of chronic colitis, nothing was thought of it. I performed an appendicostomy, the object being to irrigate the colon through the appendicular opening. About two weeks after the operation a small fluctuating swelling was noticed over the right ischio-rectal fossa. It was incised and a large amount of pus discharged. The discharge being so excessive, I introduced my finger into the rectum and found a boggy mass between the rectum and the sacrum and by making pressure backward, an increased flow of pus started. On introducing my finger into the incision, I found that it passed through the ischio-rectal fossa into the retro-rectal space. A pair of uterine dressing forceps was introduced its full length into the incision without meeting with any resistance. The opening was enlarged and drainage tubes inserted. The further course of the abscess was uneventful, but as the patient died three weeks later from general tuberculosis, and I was unable to secure a post mortem, the exact cause of the abscess, I am unable to state.

Superior pelvi-rectal abscesses are generally developed from some other pelvic organ than the rectum. In the male they may be caused by posterior urethritis, or inflammation of the prostate; in the female they are generally called pelvic abscesses and caused from infectious disease of the generative organs.

The symptoms of these abscesses generally differ from those of the retro-rectal variety in that they generally commence with a chill, fever, increased pulse rate, pain and interference with the urinary organs. In this variety the urinary symptoms may be more marked than the rectal. While the diagnosis in the latter is not difficult, in

the beginning the symptoms may be quite obscure and a complete history of all previous diseases and symptoms of the pelvic organs will need to be secured and a thorough examination, or examinations made. In case a positive diagnosis cannot be made at the first examination, the patient should be kept in close surveillance and repeated examinations made, as it is of vital importance to the future welfare of these patients that a diagnosis be made before any of the graver complications arise. The treatment of this type of abscess is the same as that for all other varieties of abscesses in the region of the rectum, namely early incision and free drainage. They should not be allowed to perforate the rectum, bladder or urethra, or peritoneum, but should be opened by a perineal incision, if necessary, carefully dissecting the rectum away from bladder and prostatic attachments. They should never be opened through the rectum. When it becomes necessary to make deep perineal incisions, they should be made by dull dissection, using the finger to avoid wounding the peritoneum. The opening in the levator ani should be enlarged by a transverse incision through its fibres as otherwise the drainage would be incomplete. Rubber drainage tubes should be introduced and the abscess cavity irrigated with antiseptic solution. In all these cases I use for the first irrigation a strong solution of formaldehyde and think it has a decided beneficial effect. The sphincter muscle should always be thoroughly dilated.

The following case of this type of abscess came under my care in June, 1905. When first seen the patient had a temperature of 104 degrees, pulse 160 very weak, and unmistakable septic appearance. Gave the history of having felt badly for three weeks prior, two weeks of which he had been in bed. Upon examination, a small opening was found over each ischio-rectal fossa with but a very slight discharge of pus. The patient being in such a desperate condition it was doubtful if he could stand an anesthetic, but a small amount of ether was given him. The contents of each ischio-rectal fossa were found to be gangrenous and were removed. At the apex of each fossa pus was exuding from a small opening in the levator ani muscle. These were enlarged by incising the muscular fibres transversely, the cavity thoroughly irrigated with a formaldehyde solution and double drainage tubes introduced in each cavity. The patient made an uneventful but tedious recovery, and has had no recurrence of any trouble since. At time of operation a slight discharge from the urethra was observed although the patient denied the existence of any gonorrheal trouble for several years. The probability is that these abscesses were gonorrheal in nature.

In closing, I desire again to impress upon the profession the fact that these obscure cases of trouble in the pelvic region should be thoroughly examined and the patient kept under close observation until a positive diagnosis is made, as neglect of them may entail disastrous complications upon the patient.

## COUGH.

## Extrapulmonary Causes of Cough, which Develop in Consequence of Pathologic Changes in the Upper Respiratory Tract, and Disturbances in the Function Thereof.

BY J. C. BUCKWALTER, M. D., ST. LOUIS, MO.

One of the difficult problems confronting the physician is to find the cause of, and cure for stubborn, harassing and persistent cough. This paper refers to those types of cough in which pathologic changes in the chest can be excluded. This class of cases have usually run the gamut of the whole pharmacopeia. Yet, aside from temporary relief, the cough lingers, causing greater or less annoyance and concern to the patient, family and friends.

The assurance that the cough is quite innocent in character, that no lesions or evidence of tuberculosis are present, offers the patient little comfort. The physician often finds it difficult to retain the confidence of the consultant, to pacify him and prevent undue and unnecessary worry, particularly in this time of enlightenment on, and crusade against tuberculosis.

Probably there is no symptom more frequently met with, aside from pain, that causes more distress than cough. Cough is an indication of some irritation or disturbance in the upper or lower respiratory passages. I believe, that in the vast majority of instances, the actual disturbance to be extrapulmonary in origin, and quite innocent in its nature, contrary to the conviction of the patients, who often insist that the seat of the trouble must be in the chest.

Extrapulmonary cough has been ascribed to almost as many causes as there are organs in the body. Various theories as to the production of reflex cough formally enjoyed a wide recognition among physicians. However, by a thorough and accurate examination, the extraneous cause will usually be found to be due to some pathologic change in the nose, naso-pharynx, oro-pharynx, palatal region, glossa-epiglottic fossae, larynx, or upper third of the trachea.

Cough is usually spoken of, as direct or reflex. It is a direct cough when there is irritation from congestion, edema, inflammation, pressure, swelling, or from foreign substances, such as mucous, pus, etc., within the respiratory tract. Cough is a reflex phenomenon when due to some pathologic change remote to the respiratory organs.

Apparently there exists among various observers more or less confusion as to the mutual understanding of reflex cough. There are those who consider all cough due to altered function of the upper air passages as reflex, while others classify it a direct cough.

From a physiologic sense, all coughs are reflex, that is, we have



an exciting organ, a central organ, and this is united in turn with an executing organ. An admirable example and interesting source of physiologic reflex cough is exhibited by irritation in the external auditory canal by the presence of a foreign body, impacted cerumen, inflammation and irritation in the cerumen secreting area, the osteo-cartilaginous junction of the auditory canal and the drum membrane. Well illustrated in this typical case. Three years ago, Mr. A., age 38, consulted me for tinnitus in the right ear, slight impairment of hearing and occasional pruritis in the external auditory canal.

On introducing the aural speculum into the auditory canal, a most persistent and violent cough was induced. An inspection of the canal showed it to be covered with dark, dry, scaly, lardaceous substance extending to the depth of the drum, which was hyperemic and thickened. The patient remarked that he had been troubled with this troublesome cough for years. This paroxysm was likely to come on at any time. During the past eighteen years he has consulted physicians who had prescribed various remedies with little or no benefit to the cough. He has been advised to leave this climate that his lungs were affected. However, the patient remained in St. Louis, continuing to cough, but took on weight.

Diagnosis.—Eczema of the external auditory canal. Treatment directed to the dermatitis stopped the cough, the itching, the tinnitus, and restored the hearing to normal. To the present the introduction of a specula or probe evokes the same old cough.

It occurs to me undue stress has been laid on nasal and nasopharyngeal reflexes as a causative factor in the production of cough. It is a term misapplied.

My experience has been that almost every case of cough due to some disturbance in the upper air passages, rather than a reflex cough, is a cough due to direct mechanical irritation of either the epiglottis, lateral walls of the pharynx, sensitive areas in the larynx, or in the trachea and bronchi. I hardly believe that too liberal construction can be given the importance of nasal and nasopharyngeal obstruction and its interference with proper respiration, causing periodic or absolute mouth breathing.

Mouth breathing is a course productive of many bad results, and harmful in proportion, as the air inspired is impure, charged with dust, not sufficiently warmed, or humidified before reaching the epiglottis, larynx, trachea and bronchi. In consequence, direct mechanical irritation is set up with resultant direct cough.

Intra-nasal factors, which may induce cough from indirect irritation through mouth breathing or from hypersecretion in the pharyngeal space, may be mentioned as chronic rhinitis, intumescent and chronic hypertrophy of the middle and inferior turbinate bones and of the mucous membranes in general, posterior hypertrophies, deflected

septum, spurs, ridges or other abnormalities of the septum and floor of the nasal fossae and polypi.

Mention should be made of necrotic, purulent, syphitic or atrophic rhinitis and sinusitis causing stenosis or profuse secretion which trickles down and pharyngeal walls to irritate the sensitive areas of the epiglottis, larynx or even the trachea.

Within the confines of the upper pharynx, the pathologic changes, namely, hypertrophic and granular pharyngitis, atrophic pharyngitis, enlarged pharyngeal tonsil or adenoids, in so far as the condition is productive of partial or absolute stenosis, or in proportion as the hypersecretion from this region provokes irritation to the sensitive areas well supplied with peripheral nerve and filaments, will cough follow.

In the lower pharynx cough is induced by elongated uvula, low hanging uvula from relaxed palate and edematous uvula from contact with the epiglottis.

In the glosso-epiglottis fossae from vericosity and hypertrophy of the lingual or tongue tonsil, the cough is dependent upon the degree of disturbance inflicted to the highly sensitive epiglottis.

A causative factor sometimes overlooked is hypertrophy of the lateral pharyngeal walls or so called pharyngitis lateralis, which in some instances is productive of distress and harrassing symptoms.

The faucial tonsils in my experience have always been innocent offenders so far as related to cough.

Cough from the epiglottis may be looked for in edema, ulceration and inflammation.

In the larynx, in benign and malignant growths, edema, foreign bodies, ulcers and formation of scar tissue, in acute and chronic inflammation, cough is usually a prominent feature.

Treatment consists in opening the upper air passages, removing obstructions, establishing free and easy physiologic respiration, lessening secretion, and obliterating all sources of direct irritation by or through means accessible and indicated by the conditions confronting the operator.

Acknowledging the value of clinical case data, induces me to append brief notes from the following cases: Case 1.—November, 1905. Elizabeth L., age 9. Referred by Dr. Kennedy for examination of the nose and throat, and treatment if necessary. Complains of cough the past two months. Internal medication unsatisfactory. Present state, no fever, normal pulse, appetite good. Patient appears to breathe through the nose freely. Mother has never observed that the child breathes otherwise. Inspection of the nose, naso-pharynx, oro-pharynx and larynx did not reveal any abnormal alterations, aside from some slight bogginess of the lower margin of the inferior turbinates. The mother was instructed to note breathing during sleep. The report next day confirmed my belief that respiration was carried

on at night, when recumbent, through the month. Diagnosis:—Intumescent hypertrophy of the inferior turbinate bodies.

Treatment:—Locally in the nose every third day at the office, a 2 per cent. cocaine spray to lessen irritation, induced by the application of a 1 per cent. copper sulphate solution. This was followed by an oily spray of menthol gr. 3, camphor gr. 2, oil eucalyptol gtt. 3, in vasenol oz. 1. to the nose, naso-pharynx and by deep inhalations into the larynx, trachea and bronchi. At home, oil vasenol comp. oz. 1, with instructions to instil 10 drops in each nostril every three hours. Results:—The nasal congestion soon disappeared, resulting in re-established nasal respiration at night. Within three weeks the cough was cured.

From the case cited, it will be noted that it is at night, when recumbent and asleep, the physiologic function of the nose is arrested by hypostatic congestion of the mucosa. From mere inspection of the nasal chambers, in many instances, a definite diagnosis can not be made. However, by requesting the patient to observe the condition of his mouth and nose on awaking in the night and morning, and to note the nasal stoppage, and consequent parched, dry, lathery, pasty feeling in the mouth and throat, with other disagreeable symptoms, as hawking, gagging, wrenching, etc., a definite conclusion can be drawn and diagnosis made.

Case 2.—Five years ago, Mrs. L., age 26, consulted me complaining of a lump in the throat and cough for the past two years. Symptoms were worse after dining. Present state.—Examinations revealed a large spur on the septum left naris, moderate pharyngitis and hypertrophy of the tongue tonsil. Diagnosis:—Hypertrophy of the lingual tonsil. Treatment: confined to reducing the enlarged tongue tonsil with the galvanic cautery. This was accomplished in three sittings when the symptoms cleared up.

Case 3.—April, 1904. Mr. G. W. G., age 45. Complains of the nose stopping for the past fourteen months, growing worse and especially annoying at night, when he breathes through the mouth. Always has a cold in the head. The ears ring and hearing is impaired. Early in the mornings is awakened by an annoying cough which is troublesome all day. Has taken many cough remedies without relief.

Present state: The nares are filled with thick, greenish secretion. The septum is thickened narrowing the nasal fossae. The inferior turbinates are turgescient filling the inferior meatuses. After removing the secretion and reducing the congestion a fair view of the nasal cavities was made possible. On the posterior end of the septum a crusty scab was clinging. By removing the scab the probe came in contact with denuded bone. Questioning the patient brought forth a history of specific trouble in the family.

Ears: Drums normal. Hearing by watch one inch right and left.



Diagnosis: Syphilitic necrosis of the vomer.

Treatment: Internally syrup stillingia comp. one teaspoonful three times daily. Ten gr. kali. Iod. 3 times daily.

Locally: Currettement of the necrotic bone with subsequent application of 20 per cent. solution silver nitrate for several weeks. Cleansing douche with an alkali solution and spraying with an astringent oily spray.

Results: Within three weeks the nasal respiration was fairly restored. Tinnitus ceased. Hearing increased to 30 inches by the watch. In six weeks the cough entirely disappeared.

Case 4. 1904. Rosie H., age 10. Complains that for the past two years has been troubled with a hacking cough more or less constant and always worse at night. Many cough mixtures from drug stores have been tried and several physicians have prescribed without relief. The father thinking the trouble may possibly be in the throat brought the child to be examined.

Present state: The nose, pharynx and larynx appear normal. The uvula does not appear unduly long on inspecting the throat with the tongue depressor, however, by examining without depressing the tongue the soft palate is noted to hang low and the uvula elongated. This case demonstrates the necessity for using care in examining these obscure conditions in highly sensitive throats.

Treatment: Removal of two-thirds of the uvula cured the cough.

Case 5. Mr. E. W., age 37, brought to me by Dr. Becker for examination and treatment of the nose. Complains for over two years with stopping up of the nose particularly at night. Takes frequent colds in the head. Annoyed by mucus dropping into the throat. For over a year has been troubled with a cough paroxysmal in character. The cough is especially annoying about bed time in the night and mornings. Of late the cough has been unusually annoying early in the evenings especially when out in company. At times the paroxysm is so violent that the patient is forced to retreat to out door air. Mr. W. has never sought relief for the cough but has been treated for the nasal stenosis.

Present state: On the septum right naris a large spur projects impinging upon a hypertrophic inferior turbinate. In the left naris the upper third of the septum is thickened and blocks that part of the fossae not closed by the tumified inferior turbinate.

The pharynx is chronically inflamed. The larynx appears normal.

Diagnosis: Chronic hypertrophic rhinitis, and spurs on the septum.

Treatment: Removal of spurs and hypertrophies with intranasal saws and scissors. This treatment resulted in establishing free nasal respiration with gradual cessation of the cough.

All patients and many physicians believe that the cough symptoms should vanish immediately on establishing nasal respiration, overlooking the fact that the symptom no doubt in most instances has been a long time in developing. However, the time for recovery usually takes days, weeks or months depending upon the degree of irritation set up in the lower respiratory tract.

#### DISCUSSION.

Dr. W. U. Kennedy, St. Louis:—There is nothing more disastrous to the peace of mind or the professional reputation of the general practitioner than those patients who are under his care for a prolonged period of time, and then fail to get relief until the cause of the condition is found by a more acute observer. The symptom of mouth breathing was what made me send this case to Dr. Buckwalter for examination. His results in that case have caused me to make a much more careful examination in other cases and I have found some seven or eight cases of this extra-pulmonary cough. In every case of persistent cough I advise not only a thorough examination of the lungs but of the mouth, nose and pharynx also. Most of these cases have been caused by nasal conditions not appreciable by ordinary methods of examination. When I find such cases I send them to the rhinologist for nasal examination.

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### SOME REMARKS ON THE TREATMENT OF CHRONIC JOINT DISEASE.\*

BY M. M. EDMONSON, M. D., KANSAS CITY, MO.

The subject of this paper covers a broad field, and I shall make no attempt to treat any one part of it specifically, but will try to emphasize the salient points that experience and observation have proven to be of the greatest importance. Treated in this way it will, I believe, be productive of more good than the report of some rare case, or the elucidation of the technique of some surgical procedure. It is probable that our work in medicine and Surgery would be more satisfactory if we knew better how to practically apply the knowledge we already possess. The results of this deficiency are seen most often in the treatment of chronic diseases, but, whatever may be the cause, considering the gravity of these cases, this is the most neglected field in medicine today. The brilliant work of the American surgeon has somewhat obscured the principles of treatment and their application in these cases. Immediate results and the prestige that comes to the successful abdominal surgeon are not incentives here. *Time*, an important factor in these cases, is often so prolonged that the surgeon himself loses that interest necessary to perfect a cure and, again, the treatment of these diseases in their incipency may be thought to be too simple to demand serious thought and attention.

Rest, to a diseased joint, carelessly suggested by the surgeon, or

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the application of some liniment, is often only the beginning. However, after these diseases have reached the second and third stages, they have become more interesting, and more active surgical measures are called for, and yet we all know that joint surgery is unsatisfactory and disappointing in its final results.

A restoration to the normal is impossible after the continuity of a joint has become destroyed. In diseases of the spine, it is almost relegated to the care of resultant abscesses. If surgery is so important here, why not prevent the conditions demanding it. However, these cases drift from one surgeon to another, and the hunchback and permanent cripple are living testimonials to the efficacy of the surgery of today. In many diseases there is a natural tendency to a restoration to health, nature's wonderful alchemy throwing off the living germ, or the dead cell. But, in these diseases the mechanical law of nature is the destroying force and, if not overcome, the disease progresses. To forcibly illustrate this: In the lower animals, especially cattle, tuberculosis is very common, their susceptibility to this disease being well known. Nevertheless a diseased spine, with a resultant kyphosis, does not exist, showing that the law of gravity is an important factor in producing this deformity. Several years ago, at a meeting of prominent English surgeons, after the late Dr. Lewis A. Sayre had demonstrated the use of the plaster jacket and jury mast, one of those present remarked that "the day of the hunchback was passed." This prophecy probably would have been more truly fulfilled if he had advocated teaching children to walk on all fours. Yet I am convinced, and honestly believe, that this prophecy might have been truly prophetic if the principles laid down by Dr. Sayre had been effectively carried out in every case of incipient Pott's disease. By effectively I mean: the superimposed weight lifted off the diseased spine and the muscular contraction overcome. It matters little how this is accomplished if the desired end is reached. The method employed is more often determined by the surgeon's personal experience. I have seen several cases, when the jacket was used as the only support and the disease high up in the dorsal region, a red flannel bandage around the abdomen would have been as equally effective. Unfortunately any mental impression produced in these cases does not effect the disease.

It might be said, with some degree of truth, that as little thought is given in making a diagnosis of incipient joint diseases as is given the treatment later. It is remarkable with what frequency rheumatism and growing pains end their usefulness, by the development of a kyphosis, or a distorted joint. It is of the greatest importance to make a diagnosis early in joint diseases, as the best results, functional and otherwise, can then be obtained and, since these diseases are often so obscure and insidious in their development, the greatest



care should be taken in every suspected case; every symptom, referable to a joint complication, should be carefully watched. The gravity and seriousness of these cases demand every consideration. While death may be remote, yet we know, if the disease is allowed to progress, life is materially shortened; add to this the months and years of suffering, the great care and anxiety entailed on the mother and family. Is not the prevention of all this sufficient incentive to a more thorough and systematic work along this line? That these cases are allowed to progress until the articular surfaces are destroyed and perfect functional repair impossible, is the more astonishing as the immediate cause depends on two well known factors: Muscular contraction and gravity, and these are the only two important elements to be considered in the mechanical treatment of *any* of the joint diseases. The sole object of this is to give rest to the joint. Only in this condition of a lessened blood supply can a reparative process be begun. This principle was well brought out by Dr. McArthur, of Chicago, at the meeting of the Missouri Valley Medical Association at St. Joseph in March. In speaking of the treatment of intestinal tuberculosis, a certain restricted diet giving physiological rest to the diseased parts, gave the very best results in these cases.

This protection to a joint must be continued for months, or even years, until all danger of a relapse has passed. It is better to make the error of continuing the treatment months longer than might be absolutely necessary than to discontinue it one day too soon. I believe many of the relapses occurring in these cases, are due to neglect, or carelessness, during the course of treatment, and I am convinced that many could be cured, in a comparatively short time, if the many relapses, though slight, were guarded against. There have been no startling advances made in the treatment of these diseases, but the ingenuity of Sayre, Phelps, Taylor, and others, have given us the mechanical means and these, with a thorough understanding of the object to be attained, will meet the requirements in most cases. These, however, are often used without a full knowledge of their application, and I fully agree with a remark recently made by Dr. Howard Hill, of Kansas City, that: "so little thought is given the subject that the instrument maker usually suggests the kind of brace to be used and applies it under the direction of the physician, who has been privately coached on the subject; the patient is then dismissed with instructions to 'keep everything properly adjusted.'" It is unnecessary to detail the results of this method of treatment.

Aside from the mechanical, an equally important part of the treatment should be as carefully considered, whatever may be the etiology and pathology of a chronic joint disease, and though we

know that a very large per cent. is of tuberculous origin, still, in all cases, there is a marked lowering of vitality and the resisting element. The importance of building up the general health and restoring the vitality, requisite to the throwing off, or preventing the encroachment of the disease, is as essential in these cases as it is in pulmonary tuberculosis. The results of outdoor life and forced feeding in pulmonary cases has astonished even its most earnest advocates. This treatment, when combined with a thorough protection to the joint, will give as brilliant results in these cases. It is only in recent years that the greatest of all tonics, sun-light and fresh air, are being fully appreciated. These should be taken to the limit and only the most inclement weather should interfere. With the body well protected cold weather is, if anything, the more invigorating, and the dreaded night air of our forefathers is even thought good enough to fill to the full the measure of this great tonic. This is now fully appreciated by the physician and its importance should be impressed on the patient by positive and explicit instructions. At Mercy Hospital, of Kansas City, "An institution for ruptured and crippled children," with which I have been connected for the past three years, we have insisted on an outdoor life for the children, and have made every provision possible for this to be carried out. The results have shown conclusively *this* to be the most important adjunct in the handling of these cases.

To repeat and emphasize what I have said: The gravity of these cases demand the best we have to give, 1st: In making an early diagnosis. 2nd: Instituting a line of treatment best adapted to the case and rigidly carrying it out. 3rd: Building up and maintaining the general health, with special attention to out-door life, and forced feeding.

## NEURASTHENIA, TRAUMATIC AND IDOPATHIC: ITS PATHOLOGY AND PROGNOSIS.\*

BY DAVID S. BOOTH, M. D., ST. LOUIS, MO.

According to the now generally accepted theory of the histology of the nervous system, it is composed of a vast number of neurons, each consisting of a cell body with its processes (axone and dendrites), having the power of assimilation and possessing the properties of irritability, mobility and conductibility, so that each neuron is anatomically a unit though physiologically a part of one great complex hierarchy functionally grouped, so that while each plane is responsive to stimuli from all other planes as well as to external irritation, all are normally subservient to, and more or less under the control of, the highest area, viz:—The psychical centers.

In the vigor of health and strength, the cells are plump, being filled with material for their own nourishment as well as for maintaining their functional activity, resembling in appearance, elastic capsules filled with fluid; whereas physiological activity causes them to shrink, giving them the appearance of elastic capsules from which much of the fluid has escaped. This is a normal, healthful fatigue from which restoration follows rest and sleep, but continued enforced activity, occasions a pathological fatigue—Neurasthenia, which, as its names indicates, is a “nerve (cell) weakness”—an acquired persistent functional debility from which there results an exaggerated irritability and instability of the neurons.

Neurasthenia is not only a primary exhaustion of the nerve cells, but an autochthonous intoxication from irritant poisons<sup>1</sup> resulting from cell metabolism which accumulate by virtue of the disproportion between rest and exercise, causing cerebral irritation which, projected as peripheral sensations and misinterpreted as evidences of local disease, leads to expectant attention, introspection and apprehension, from which erethism and hyperaesthesia of the higher cerebral neurons result, intensifying the already present sensations and sapping the residual vitality of the cells. Since corporeal activity is proportionate to cerebral vigor, there is present in neurasthenia, anaemia from weakened digestion and circulation, and auto-intoxication from the absorption and retention of toxins due to intestinal atony and renal insufficiency.

There is produced a vicious cycle of action and reaction, which, if not interrupted by appropriate treatment, continues until it results in a general collapse of the patient.

From this brief description of the process by which Neurasthenia

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is evolved, it will be noted that it is slowly developed and results from prolonged excessive cerebral activity, and then usually, if not always, in the neuropathically endowed, when accompanied by continuous exalted emotionalism; i. e., anxiety, worry, grief, etc., so that it is at least doubtful if it can result primarily and solely from a single shock, whether physical or psychical.

Physical injury would cause organic disease which would, doubtless, primarily involve the blood vessels and connective tissue, affecting the neurons only secondarily, whereas mental shock would involve the psychical centers—most likely a temporary functional disturbance of the neurons, producing an abeyance of cerebral activity, as in coma, shock or collapse; an excitation, as delirium, or an instability, as hysteria,—all readily explained by the neuron theory of cerebral architecture, which recognizes the neurons as storehouses of energy which may be discharged by stimuli received from higher or lower neuron areas through contact of their processes.

This loss of energy may occur suddenly or slowly, continuously or intermittently, each condition presenting distinctive symptoms. The result is a more or less withdrawal of the fatigued cells from further activity until recuperated—an explanation of the improbability of permanent results following single psychic shocks when not followed by stress, i. e., apprehension, worry, etc.

Tuke anticipated the neuron theory when he wrote:—

“In considering the changes which occur in the tissue of the brain and the vessels, the frequently felt difficulty of determining their order of sequence arises; but certainly when, from an overwhelming mental shock a man becomes paralyzed, whether in speech or limb, it seems most natural to conclude that, as mind is the function of brain, the first event in the series is a change in the normal condition—the molecular arrangement—of some portion of the brain tissue, which is transmitted simultaneously to the conductors of voluntary motor power, producing transient or permanent effects, according to its force and the weakness or proclivities of the part upon which it falls, and to the vaso-motor nerves, causing sudden vascular changes in the brain, which interfere with its nutrition.”

These are the changes found in idiopathic neurasthenia, the vascular changes evidently being secondary and consequent to the weakened neurons.

Emotional shock could act as the “straw” to precipitate an impending breakdown, or furnish food for morbid introspection, apprehension and auto-suggestion, which with enforced physical inactivity, would ultimately result in neurasthenia; but would it be traumatic?

Again, a localized physical injury can, through enforced introspection and expectant attention, serve as the starting point in our

vicious circle, though, as Erichsen observed, it is rare for nervous symptoms to follow apparent physical injuries other than to the nervous system itself.

Erichsen wrote, "A person who by any of the accidents of civil life meets with an injury by which one of his limbs is fractured or is dislocated, necessarily sustains a very severe shock, but it is the rarest thing possible to find that the spinal cord or brain has been injuriously influenced by this shock that has been impressed on the body."

Tangible injuries are usually self satisfying to the patient and receive a more or less favorable prognosis from the attending physician which relieves anxiety and apprehension; whereas the subject of an accident without evident injury will usually receive a doubtful prognosis even should he escape a "disquisition" upon "Railway Spine" and "its probable development and malignant consequences."

Regarding "Traumatic Neurasthenia," Dana says:—"Careful research, however, often tends to elicit the fact that previous to the injury, the patient was an alcoholic, syphilitic or neurotic and perhaps already had the beginning of the alleged traumatic disorder."

The theory of a distinctive traumatic neurosis has certainly received its death knell, as even Oppenheim, the father of "Traumatic Neurosis" *sui generis*, according to Dr. de Jacobson,<sup>2</sup> has yielded to the philosophical deductions of Charcot, Gilles de la Tourette and others of the Salpetriere school." In other words, the French school has convinced the German school that neurotic disturbances following railroad accidents are not new nervous diseases, as previously taught by Oppenheim, but that the shock attending railroad accidents simply brings forth the ordinary symptoms which manifest a neurotic diathesis.

Late editions of Oppenheim's work on nervous diseases evidence this change of faith.

J. Mitchell Clarke, in his late work on hysteria and neurasthenia, writes that the symptoms of traumatic hysteria and neurasthenia "are identical with those which are met with in cases due to other causes," and expresses the belief that "in those cases in which neurasthenia follows upon a slight personal accident, unattended with circumstances which provoke terror, . . . . it will rarely be found that the patient's health was altogether satisfactory for some time antecedent to the accident."

Berkeley writes that "It must be conceded that the hereditary taint is the all-important factor, and that the constitutional disturbances, trauma, intoxication, or other conditions, are after all in the majority of examples only provocative agents.

"A sound nervous system is an inheritance that only the most strenuous provocation can overturn for any length of time, and even

when an upset has been accomplished, a restitution to the normal is soon obtained under favorable circumstances."

While neurasthenia is not infrequently found after accidents, it is doubtful if trauma is ever the primary and sole cause of the disease; however, since claimants allege it; defendants concede (or acquiesce in) it, and courts sustain it; we will not now refute it.

In the production of post traumatic neuroses, "trauma acts, first by its effects on the mind (psychical traumatism); second, by its effects on the body which anchors the attention on one point.<sup>3</sup>

Winslow,<sup>4</sup> many years ago, wrote, "How much of self-created bodily suffering, voluntarily courted physical pain, zealously trained, distressing disease of the mind, arise from lengthened anxiety and continuous fret and worry as to the state of the corporeal and mental health. The increasing dread of the presence, and constant morbid anticipation of approaching disease, whether bodily or mental, very frequently creates the mischief so much anticipated, and so greatly apprehended."

Tuke<sup>5</sup> wrote, "There is no sensation, whether general or special, excited by agents acting upon the body from without, which cannot be excited also from within by emotional states affecting the sensory ganglia; such sensations being referred by the mind to the point at which the nerve terminates in the body."

Thus the feeling of hunger and the appetite for food, is represented in the stomachic branches of the vagus and the cerebral centers of the same, and as local conditions of the stomach may destroy or increase the feeling of hunger, so central disease may give rise to sitophobia or bulimia. Similarly, vomiting may be caused either by disease of the vagus center of the medulla, the psychical centers of the brain, or to local disease or irritation of the stomach. Normally, afferent sensations are being continually received by the brain from the various tissues and organs, and efferent (regulating) motor impulses, returned—all subconsciously, until a hyperaesthetic cerebral state or expectant attention brings into full consciousness these normal organic (cenesthetic) sensations, which misinterpreted as evidences of diseases, lead to apprehension, worry, etc., from which follows the usual vicious cycle of action and reaction until disease is established.

We have given a resume of the histology of the nervous system, reviewed the etiology and development of normal and pathological fatigue and attempted to explain and illustrate the possible effects of physical injuries and emotional states upon the development of disease, believing thereby to prepare us for the consideration and better understanding of neurasthenia in its various phases.

That there is often a wide difference in the symptoms of different cases of neurasthenia, does not depend upon its cause, but to the broad application of the term, which includes every degree of func-



tional weakness, and consequent irritability or languor of brain cells, between fatigue and true insanity, as well as to the multiplicity of functions of the organ effected.

It would be a wonder indeed did not an organ of so many and such varied functions, present, when disordered, a great variety of symptoms, so that while there may be symptoms common to most cases, each case has symptoms peculiar to the portion or portions of the brain more especially involved. Moreover, although neurasthenia may in its incipency be confined to a limited area, through the association and interdependence of the neurons, the condition may extend until practically the entire nervous system is involved.

Even the earlier classification of Beard (who coined the term neurasthenia) into cerebral, spinal (spinal irritation), gastric, sexual, etc., has been abandoned, so that now all cases of functional "overtire" of the nervous system, irrespective of the cause, location, degree or intensity, are classed under the generic term, neurasthenia, the pathology of which depends solely upon the stage and degree of nerve-cell involvement.

Through experimentations upon the lower animals, Hodge gives the following pathological changes in neurasthenia:—

"The cell nucleus is shrunken, displaced within the cell and bounded by an irregular, jagged edge. Vacuolation appears within the cell protoplasm from loss of substance through activity—the cell tires rapidly, at first, then more gradually, until exhausted.

"The axone and dendrites share in the pathological processes within the cell body, showing similar evidences of degeneration."

In conclusion, we find practically no evidence, and certainly no precedent in the broad domain of medicine, for the assumption that traumatic neurasthenia differs pathologically from neurasthenia developing from other causes, or idiopathically.

"Traumatic" neurasthenia perhaps is complicated more often with hysteria and hypochondriasis, though these are frequent accompaniments of idiopathic neurasthenia; nor is the frequent factor of anxiety for financial reimbursement a distinguishing mark of the traumatic variety, since it does not differ from the various emotional states which are often present in the idiopathic form, either as cause or consequence.

In a private letter, Dr. Mettler, author of a recent excellent text-book on Nervous Diseases, says:—

"I am one that believes that 'traumatic' differs from 'idiopathic' neuroses (hysteria and neurasthenia—especially) only in a medico-legal sense; they are both the same, with the exception that the former (traumatic) usually, or very often, are court cases and are complicated by the question of damages. Hence, I do not discuss traumatic hysteria or neurasthenia as a distinct and unique condition.

"In a word," he continues "the traumatic troubles are either pure-

ly medical or purely medico-legal questions. Medically, they are well known conditions, and are always the same, both in and out of court. I think this ought always to be insisted upon by the 'expert' on the stand, and the counsel ought not to be allowed to confuse the medical question and cast doubt upon well established medical lore by striving to show that traumatic neuroses (seeking damages) are a sort of distinct, separate and unique troubles apart from other forms of neuroses."

Dr. Mettler expresses in plain and clear language, if generalized, the modern conception of disease, viz:—that the pathological findings of any given disease will not vary with the exciting cause, e. g., under the same conditions, an inflammation excited by traumatism is the same as one originating idiopathically.

Neuroses, as well as organic conditions, following trauma will therefore have the same symptoms, pathology and prognosis as the same diseases originating idiopathically; but symptoms vary much in different cases of the same disease, even when due to exactly the same cause.

Physical injuries and organic diseases of the nervous system usually present diagnostic objective symptoms by which to differentiate them from the neuroses.

The prognosis of neurasthenia is good—all degrees short of exhaustion, are amenable to treatment. Fatal terminations are rare, and then certainly due to delayed or inadequate treatment, which sometimes occurs, as it is often impossible to convince a neurasthenic of impending disaster until too late to prevent collapse, which "seldom comes like a thunderbolt out of a clear sky;" on the contrary, to the practical clinician, like all "coming events," it "casts its shadow before," and usually, a long time before.

Other things being equal, the more acute the onset, the less the predisposition, the milder the emotional involvement, and the earlier systematic, radical treatment is instituted, the better the prognosis and the shorter and less eventful its course.

The period of necessary professional observation and treatment to restore the neurons to a stable condition, usually appears to the patient and neurological tyro unnecessarily prolonged. Insufficient treatment accounts for most of the relapses and recurrences. I might have said "all," were it not true that they do sometimes result from the same causes which occasioned the previous attack, though the average individual profits by one experience with a "deeply rooted" neurasthenia.

I have observed recoveries in cases of all periods of duration up to thirty-three years.

Patients in whom the diseases has existed many years may not have the endurance they would otherwise have had, though life is rarely shortened.

Beard said, that "Neurasthenics would have a long and happy old age."

Dana says, "They pass through the valley of the shadow of death, but the experience may be a profitable, if not a pleasant one."

In treating neurasthenics the physician must ever bear in mind that he is dealing with a "deficit of nerve capital"—even bankruptcy—to regain which, anabolism must exceed catabolism.

After we have restored our patient's physical condition, we are occasionally chagrined to find him, like "one convinced against his will," "of the same opinion still,"—viz:—he is "not well," or "does not feel right." On this point, we can do no better than to quote from Dr. Cowles,<sup>6</sup> who says:

"The nervous invalid may remain such, even under strongly recuperative tendencies, simply from mental habit, confirming it both by misuse and disuse of the normal power. The patient, powerless to contend alone against the forces of weakness and habit, must have a physician for both mind and body."

These are the cases which above all others, require the highest degree of judgment, tact, skill and resourcefulness to fully restore to a healthy mental tone.

Linmar Building.

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<sup>2</sup>*Alienist and Neurologist*, July 1894, translation from Copenhagen Hosp. Tid., 20th Sept., 1893.

<sup>3</sup>Da Costa, Modern Surgery.

<sup>4</sup>Obscure Diseases of the Brain and Mind, 1866.

<sup>5</sup>Influence of the Mind upon the Body.

<sup>6</sup>Neurasthenia and its Mental Symptoms, The Shattuck Lecture, 1891

## PATHOLOGY OF PELVIC INFLAMMATION.\*

BY T. J. BEATTIE, M. D., KANSAS CITY, MO.

The subject of pelvic inflammation is an exceedingly complex one and has furnished a fertile field for discussion. It is interesting to glance through the literature of a few years ago when Hewitt, West, Simpson, Sims, and other able men were writing upon this subject. During their time there seemed to be little doubt as to its true pathology. They claimed, and their opinions were almost universal, that the lesion was in the cellular tissue, but by the able investigations of Matthew, Duncan, Barnes, and others and by the advent of abdominal surgery, a very large percentage of inflammatory affections of the pelvis were found to be due to changes in the peritoneum, and cellulitis was looked upon as comparatively rare.

Today it is quite generally conceded that both cellulitis and peritonitis do occur and they have their separate places in pelvic pathology. The large percentage of cases are due to bacterial invasion, and the infection may spread, first by continuity of mucosa,

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second, lymphatics, third, blood vessels; they are not infrequently sequelae or complications of pre-existing inflammatory diseases. The cases that are caused by continuity of mucosa are principally gonorrheal, tubercular or from staphylococcus infection. When the inflammation occurs by continuity the peritoneum is more likely to be the structure affected. It is in these cases that the tubes and ovaries are found to be involved and you will more frequently find it bilateral. Gilliam and other prominent writers claim that in cellulitis the invasion is usually by the lymphatics. The essential cause is the streptococci, staphylococci and bacterium coli, never arising from gonococci infection. These are the cases that so frequently follow confinements, abortions or injuries. When peritonitis exists you will find changes going on in the tubes.

In 1876 Neoggerath, then of New York, astonished the world by his article entitled "Latent Gonorrhea in the Female." He claimed that no well-marked case of gonorrhea in the male was ever cured.

Its chief characteristic is in its lasting vitality long after apparently cured. It may remain inactive in the mucous membrane liable even while quiescent in one to be communicated to another. This is why previously healthy women soon after marriage begin to complain of symptoms so common in pelvic diseases.

Sanger claims that 25 per cent. of his hospital and private patients have gonorrhea; some observers place the average even much higher but these are probably taken from clinics and are largely made up of prostitutes. Often cases of pelvic disease will develop insidiously, without any marked symptoms, and only after careful physical examination will the true condition be detected. This is explained by the vagina being covered by pavement epithelium relatively smooth, like skin, and supplied by acid secretion. Bacteria are not so likely to lodge here and the acid medium is unfavorable to the growth of 90 per cent. of bacteria. This is not the case in the uterus. The endometrium is especially susceptible on account of the arrangement and thinness of the epithelial covering; by this arrangement the uterus is apt to receive, retain and distribute infection.

The fallopian tubes are anatomically continuous with the uterus, and are in direct communication with the ovaries and peritoneum. Infection may reach these structures and the symptoms be very slight. Until the symptoms of tubal and ovarian disease manifest themselves, we may get accumulations of pus in the tube and marked symptoms, perhaps chill, fever, pain, swelling and the clinical symptoms clearly outlined, but the majority of cases of pelvic inflammation present symptoms that in themselves are misleading, having come on so gradually and presenting a mild form until the patients drift into invalidism. They consult a physician for leucorrhoea, menstrual derangements or some other condition that is only one of

the train of symptoms that so often accompany pelvic inflammation. I have under my care at the present time a patient who gives a history of chronic invalidism for nine years, having consulted a number of physicians and having been treated by them. Physical examination clearly revealed an accumulation of pus in both tubes.

An accumulation of pus in the tube may give very little trouble; by being retained hermetically sealed it may become transformed into serum by spontaneous destruction of the germs, the phlegmonous process come to an end, or the serum increased in quantity and form hydrosalpinx. It is now conceded by the best authorities that hydrosalpinx is always secondary to inflammatory changes in the tubes. The changes that take place in the vessels of an old diseased tube may give rise to a condition known as hæmato-salpinx, and the same may be said of complications occurring in the ovaries.

In the large percentage of inflammatory conditions of the tube you have changes going on in the peritoneum; nature throws out its safeguards to prevent further involvement and you have the tube and possibly the ovary adherent to the surrounding structures, curled, or bent or twisted, upon itself. You will often find adhesions binding the uterus firmly to the surrounding structures but if it is tubal you will find the exudate back of the broad ligaments.

Cases of endometritis complicated by adhesions should be looked upon in a more serious manner than they are by some physicians. Some months ago I was called by a physician to see a case of acute general peritonitis the history of the case showing that she had come to this city and consulted him. She had symptoms of endometritis, characterized by purulent discharge from the endometrium and frequent and quite profuse menses.

The doctor curetted his patient and in 48 hours symptoms of pelvic peritonitis, and then more diffuse peritonitis, developed. When I was called she was in a very dangerous condition, pulse 135, temperature 104.2. Physical examination per vaginam showed distinctly a pocket of pus which was opened and drained through the vagina. She recovered from this attack but has never returned for further examination. Office manipulations and endometrial applications in these cases are always dangerous.

*Pelvic Cellulitis.*—This condition occurs much less frequently and according to our best writers the invasion is principally by the lymphatics. It occurs in the lower strata around the vagina and neck of the uterus and in the folds of the broad ligaments. To distinguish it from peritonitis, Nonat described it as periuterine and lateral phlegmon, Churchill as pelvic abscess. Virchow claimed that the other names suggested, did not indicate the difference between peritonitis and subperitoneal disease and suggested the name of parametritis.

In some cases following childbirth, abortion or any injury to

the genital tract, there may be quite an infiltration in the tissues and some temperature which will give the attending physician great anxiety; but the process runs its entire course in a few days. Dr. T. A. Emmett, in an article read before the American Gynecological Society, said: "It is a matter of common observation that this form of pelvic inflammation tends rapidly to resolution, and the tissues soon regain a healthy state, if septic poisoning does not take place. There is always more or less injury to the mucous membrane and soft parts, and unless we are extremely cautious in our methods of cleanliness we are liable to infect our patients and the cellular tissue become the seat of an extensive suppurating mass, when no involvement of the tubes whatever occurs." The following case came under my care:

Mrs. F., age, 27, married four years, one child 3 months old, good family history. Parents still living, healthy and well. Prior to her marriage regular in her menses, but experiencing some discomfort before the flow occurred; it was without pain. During the early months of her pregnancy she was exceptionally well. Her baby was born April 22, 1903. She did not use vaginal douches; the lochial discharge was scanty and very light in color, after the first two days. She said she had not felt well since her confinement and at the time she consulted me had lost 30 lbs. Her labor was severe lasting about 16 hours, she did not know that she had any temperature following her confinement; she did not feel well, or regain her strength afterwards. Felt weak, no appetite, dull aching pain through the abdomen and back, severe pain on left side, low down. She attempted to sit up three weeks after her confinement but was too weak. As time passed her symptoms became more severe; she had some fever in the afternoons and was unable to nurse her baby. When she consulted me she presented the picture of one suffering from some disease that was fast sapping away her vitality. She was pale, anemic, and in her attempts to be around she unconsciously placed her hands on her hips. She was able to be around her room a short time in the mornings, but as night approached she felt weak and feverish and during the night would perspire profusely. She had a temperature of 102, pulse 100; this was about the middle of the day. Upon physical examination I found the perineal body injured, slight laceration of cervix and the uterus bound down by adhesions. By manual examination I revealed, on the left side, a mass that presented the shape and outline similar to a pus tube, but higher up and more to the left side than we usually find collections of pus in the pelvis. I advised operation by opening the abdomen, fearing that a suppuration dermoid, or some form of growth was present which would be difficult to remove through the vagina. Operation was performed July 27th. Upon by opening the abdomen, fearing that a suppurative dermoid, or



proved to be a fold of omentum about  $1\frac{1}{2}$  inches in thickness extending to the right side. This was plastic material to protect the peritoneal cavity. It was extremely interesting to see how nature had thrown out this protection; the tube, ovaries and cellular tissue were matted together; there was no distension of the tubes. I did not disturb the plastic material but mopped out the pus and packed the pelvis with guaze. This I think is a case of cellulitis; the infection was through the lymphatics and suppuration occurred. The tubes and ovaries were in a healthy condition. She made a complete recovery.

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### EARTIRE AS A FACTOR IN DISEASE.\*

BY E. H. MUSSON, M. D., NORBORNE, MO.

As physicians, we are agreed that the great host of trying nervous cases is ever increasing. Its members haunt our offices, yea, even our footsteps, and many go to swell the ranks of the victims of the fakir and the quack. Their symptoms are legion and the names we give them are often convenient "somethings" by which to eliminate one unknown with another—neurasthenia, nervous irritability and reflex ailments whose scope is coincident with the range of the nervous system itself. Lacking a tangible pathology, their study is often abandoned for that with the microscope and scalpel. Nevertheless, they are always with us and the general practitioner is the one who must heed their clamor for relief.

Anything which might help to resolve these complex ills into their elements and further clarify our knowledge, would seem to be worth our while. The relation of *sound*, more especially *noise*, to functional nervous disease, is a field of study which has scarcely received its share of attention.

Of all the organs of special sense, the auditory apparatus is second in point of importance in development, structure and function. The terminations of the auditory nerve serve a purpose similar to that of the retina. The two muscles of the middle ear, the tensor tympani and stapedius, perform a sort of accommodative act. The primary and secondary centres in the brain involve a considerable of cerebral structure.

There is now no doubt of the important causal relation between unrelieved eyestrain and many cases of headache, nerve-exhaustion, "brain-fag," so-called "nervous dyspepsia," and even spinal curvature. The revelations which have come through the thought-provoking work of Dr. Gould and others, emphasize again and again the marvelous inter-dependence of all parts of the nervous system.

Noting the success of the oculist with his two little pieces of

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glass, after the patient has gone the round of analgesics, cathartics, and stomachics, a seemingly plausible question suggests itself, viz.: May there not be an analogous condition of fatigue of the auditory apparatus with important reflex manifestations? For this as a clinical entity, the term "*Eartire*" has been proposed.

Is it not possible that mal-adjustment of muscles or ossicles may give rise to strain akin to that caused by refractive error? Is it not possible that the long continued registration of unrhythmical sounds by even a *normally* adjusted ear may greatly fatigue the cerebral auditory centres and have something to do in the causation of neurasthenia, headache, insomnia, etc.?

In the eye, slight variations from exact anatomical relations are of immense importance and we are told that deviations which can be measured by the thickness of a sheet of paper may be of much consequence. Theoretically, at least, it seems entirely possible that there is such a thing as a distinct fatigue neurosis of auditory origin. Furthermore, that individual susceptibility to auditory impressions may vary greatly. To touch again on the analogy we are trying to follow—we are all aware that one person may go through life with a high degree of refractive error without much discomfort whilst another is made miserable by half a diopter of similar astigmatism.

The relation of the multiplicity of noisy machinery to nerve-exhaustion and allied disorders is worthy of some study. These evidences of modern progress have invaded our whole country, even to the farm-house and hamlet. That there is some subtle, but nevertheless, profound wear of the higher nerve centers from this cause is highly probable and its effects may be more far-reaching than we imagine. The study of eyestrain followed in the wake of the printer and the schoolmaster and may not *eartire* demand our consideration as a concomitant of our noisy environment?

Let us view the subject in another way. Sounds in rhythmical succession become music—the antithesis of noise, crudely speaking. The therapeutic value of music—its restfulness to the nervous system, is well recognized. Its importance in hospitals and sanitariums is very great—alienists tell us of its value in asylums for the insane—we are told that it will even "soothe the savage breast." Surely the injurious effects of noise may be as great as that of music is salutary.

It is difficult by any means now at our disposal, to demonstrate clearly the weight to be given *Eartire*—to disassociate it from other elements of fatigue, as has been done in case of eyestrain. However, its importance has long been tacitly recognized. A long list of facts might be cited which seem to support the belief in the profound effects of *Eartire*. We guard from noise, our patients acutely ill, lest there should be added a source of nervous exhaustion which

would determine a fatal outcome. With life worn to a thread we use all means to preserve the integrity of the nervous system and perfect quiet seems to aid greatly in husbanding the low supply of vital energy.

Neurologists insist on perfect quiet in many instances. Much is said of rest and "rest cures," but is it not highly probable that quiet plays a more important role in the cure than is generally suspected? Hospitals and sanitariums are built in as quiet locations as possible, and were we able to resolve the problem of cure into its elements, we would likely find that simple quiet was a very potent factor.

The urban citizen seeks the country "far from the maddening crowd," for rest and change of air. Does not the freedom from noise which has continually assailed his ears, have much to do with his rejuvenation? A sort of a "silence cure," so to speak.

Brevity compels the omission of the reports of some cases which appear to confirm the notion of a distinct fatigue neurosis due to noise. Some further research along the line of the relation of sound to disease would seem to be justified. As far as I am aware, there is practically no literature at all on the subject. To facilitate the collection of data I have formulated some questions which can be submitted to patients, but must omit them here.

A therapeutic hint or two—intervals of perfect quiet, may serve in lieu of sedatives or even analgesics. Removal of some patients from noisy surroundings will answer for sanitarium treatment.

As general practitioners we ought to give more painstaking study to causes and cure of functional nervous disease and this will help us to defeat many parasites of our profession, in this, their great stronghold.

My whole theme no doubt seems simple, but simple things are often tardily appreciated. It is well enough to recall the historical fact that the world was very slow to believe the truth about unrelieved eyestrain.

In conclusion let me add that this is submitted to you with several interrogation marks, but with the belief that it contains some hints of truth which may be of value to those accustomed to noting carefully the psychic and nervous phenomena of their patients.



## VALVULAR LESIONS OF THE HEART, SOME OF THE CAUSES, AND PROGNOSIS.\*

BY R. G. DAVENPORT, M. D., TRENTON, MISSOURI.

In speaking of diseases of the heart, I do not hope to advance new thoughts, but rather refreshen our memories with some of the diseases this organ suffers. I think if we will hold in our imagination, three distinct departments in considering the heart; namely the cause, seat of lesion, and probable termination, our line of treatment and prognosis will be easily decided upon. When we are consulted for some abnormal condition of the heart, it seems to me, we should ask ourselves; what is the origin of the disease, what particular part of the heart is affected, and what is the condition of the system taken as a whole?

Under the first question of the origin of the disease, we have rheumatism, pneumonia, atheroma, syphilis, eruptive fevers, psychoneurosis, etc. If the patient under observation at some future time has suffered an acute attack of rheumatism of severity and suffers more or less with that malady, we can feel reasonably confident the disturbed valve or stenosed opening is due to an endo-carditis as a result of rheumatism. If we have determined the origin rheumatic, the treatment consists of antirheumatics, and if valvular compensation is established, our prognosis is favorable, providing the patient does not suffer an acute attack of rheumatism.

Atheroma is an insidious disease usually secondary, and chiefly in middle and latter life; its seat of primary operation is the ascending arch of the aorta, and is progressive in destroying the inner muscular fibers, rendering the vessels inelastic, and the patient's condition perilous under abnormal exercise.

From its seat of election, we would naturally expect the aortic valve or orifice to become affected, and the extension into the coronary arteries producing fatty degeneration; especially is this the case past the age of thirty-five without compensation, when our prognosis would be very unfavorable. Syphilis has been described by many writers as affecting the valves rendering life very insecure; hence if our origin has been determined syphilitic, the prognosis is always unfavorable.

Eruptive diseases in childhood producing endo-carditis are as significant of resulting valvular lesions, as the ears of a child suffers lesions with the vault of the pharynx full of adenoid vegetations. Lesions wrought at this age are usually favorable, as in many instances, compensation is so complete, the subject is not cognizant of

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its existence until ascertained by the doctor, on applying for insurance, etc.

Pneumonia producing endo-carditis is a dangerous condition as statistics have shown the aortic orifice is most frequently affected. It would seem the mitral valve would be the one since the pneumococci are first in the left auricle, then ventricle, which is doubtlessly the primary seat of endo-carditis in pneumonia. It is very significant that diseases of the lungs are exciting factors in producing endo-carditis from the fact that the left side of the heart is affected many times over that of the right side, hence in all acute inflammatory infectious conditions, it behooves the physician to watch and protect the heart. I would like to ask in your experience what per cent of pneumonias recover with a mitral incompetency. Our best physiologists divides the heart's cyclic time into two-tenths for auricular systole, four-tenths for ventricular systole and four-tenths for diastole; you see the aortic valve is closed during diastole or four-tenths and auricular systole two-tenths; hence a partial explanation for the pneumococci attacking the aortic valve, first, is that the aortic valve is closed six-tenths of the heart's cyclic time and the mitral only four-tenths, giving the organism more time for invasion. Psychic irritation of the vagus nerve slows the heart thirty-five per cent. of its output, as has been demonstrated clinically. Each of us is cognizant of the potency mental phenomena have over the physical, as is set forth in fainting, worry, etc. I offer as a suggestion, if a person is easily excited the tension of the nervous system would bring about a contraction of the peripheral vascular system, increasing the amount of work upon the left heart very materially, and in such cases, we should have a hypertrophy of the left side minus a lesion. It is in these cases, we have difficulty in assigning the cause, unless the psychic irritation be cited. "Balfour speaks of the pathetic manner in which life is shortened every day by the petty troubles, anxieties, and worries, which are of daily occurrence, and which by continual inhibition, impairs the ventricular systole, and favors dilatation of the heart. There are few of us he says, who have been in the practise for even a short time, who have not had occasion to note the development of serious cardiac symptoms arising out of untoward domestic affairs, the worry of an unsuccessful business, or even the wear and tear of a too successful business, which has outgrown the physical powers of its manager." Under this cause our prognosis depends upon the extent of removing the susceptibility of psychic irritation, which is very obstinate.

In the second department of considering the seat of the lesion, we have tricuspid, pulmonic, mitral and aortic orifices to consider, each of which may be regurgitant, stenosed or both. If our lesion happens to be mitral incompetency of a rheumatic origin in early youth, we are safe in assuring the patient that he will experience little trouble so long as free of any condition producing endo-carditis, whether it be

rheumatism, pneumonia or any of the other conditions above mentioned.

If the lesion is mitral regurgitation, an extra effort upon the left ventricle to supply the systemic circulation is produced, and the regurgitant quantity into the left auricle dams back the pulmonary vein flow to the tissues of the lung, and from the tissues into the pulmonary arteries to the right ventricle, which cavity has a higher pressure that produces hypertrophy of the right side. When the hypertrophy is equalled on either side of the heart, under a mitral incompetency, we have compensation established, and the lesion is of little consequence, as it may never inconvenience life; however these patients should be instructed relative to the conditions that jeopardizes such a heart as exercise, stimulants, etc.

Now suppose we ascertain the origin to be syphilitic, we know, even though compensation may be established, the progressive destructiveness may destroy the valves at any time producing death. We also know our line of treatment would be quite different from the above condition, and our prognosis very grave.

If the lesion be due to atheromatous changes, and the patient in middle or later life, we can offer them very little, this is especially true, when the aortic orifice or valve is affected; hence if the lesion be aortic incompetency, the gravity of the condition depends more upon the invasion of the coronary arteries, producing fatty degeneration of the heart than the simple incompetency in this condition, age would be a factor in determining the cause.

We are told that aortic lesions are less favorable than mitral, that mitral stenosis is more unfavorable than incompetency. That tricuspid systolic murmurs is ominous because usually a manifestation of cardiac failure, but may disappear if the failing heart responds to remedies. Every woman with mitral stenosis should approach wedlock and especially motherhood with a degree of anxiety, on the part of her physician.

Dr. Whittaker says, "Pregnancy always aggravates organic heart disease," and the following heart specialists give their statistics of women suffering with heart lesions during pregnancy. Duroziez called attention to the menorrhagia which occurs in these cases, and which occur during the stage of gestation. Sterility is frequent, abortions are more common, sometimes in the very first days, but often as late as the seventh month; the frequency of premature birth has been especially marked by Porak, Duroziez and Budin. Porak in 1880 made observations of the principal events which occurred in ninety cases of heart disease during pregnancy. The condition was stationary twenty-one times, and was aggravated sixty-three times, temporarily forty-six, permanently fifty-nine times. The heart disease was aggravated by labor twelve times, improved during parturition twenty-seven times, during labor twice, during the puerperium



twenty-five times. Schlayer shows from the study of twenty-five cases, and studies also of cases in literature, that the danger of pregnancy and parturition do not depend upon the kind of valve lesion so much as upon the condition of the heart muscle; that is, upon the degree of compensation. Premature labor occurs more frequently in multiparæ than in primiparæ. The same thing is true of deaths. Two patients died in parturition, ten in puerperium all of whom were multiparæ. Of seventeen cases under the observation of Leiden, sixteen were lesions of mitral valves, and of these cases eleven died. Death occurs only rarely during pregnancy, more frequently during labor and most frequently shortly after delivery. The immediate cause of death is either oedema of the lungs or collapse of the heart. When the patient survives, she remains feeble for a long time or it is found that the compensation is broken.

Pulmonic murmurs of regurgitation or stenosis are very rare. Many writers contend that pulmonic incompetency is invariably associated with pulmonary tuberculosis. This incompetency would be conducive of a diminished blood supply to the lungs, hence the vitality lowered. The pulmonary valve offers one point of interest in being accentuated in mitral lesions, and at the onset of any pulmonary consolidation, as in pneumonia, tuberculosis, etc., that is, as long as the compensatory hypertrophy of the right ventricle lasts. It is only when this hypertrophy or the muscular walls begin to flag that the accentuation of this valve sound disappears. Tricuspid murmurs are more rare than pulmonary and especially stenosis, which is considered the rarest of heart lesions. The murmurs of the heart are of no little value in our forecasting other conditions in the human economy. Supposing a woman in the early stage of gestation consults you and she has mitral stenosis. Suppose a young man has suspected pulmonary tuberculosis and you find pulmonary incompetency. Suppose you are called to a case of pneumonia and find mitral insufficiency, what can we offer an asthmatic with a mitral murmur? What hope can we offer an elderly or middle aged person for that matter, whose vision is failing rapidly without apparent cause, but has aortic incompetency?

In dealing with all conditions of the body, we should insist on making a thorough examination of the heart, and unless the patient strips to the waist, and then auscultate each valve for pre and systolic or pre and diastolic murmurs, we are not doing ourselves or patients justice. It requires considerable practise to detect an aortic insufficiency or mitral stenosis, as the former murmur is prediastolic and the latter presystolic, but practise will enable anyone to do it.

We come to the last department or question of considering the system as a whole, and I mean by this, that if we have a strong, robust individual with a mitral incompetency of a rheumatic origin, and compensation is established free of precordial distress, we can give a

favorable prognosis invariably; whereas on the other hand, if the lesion is syphilitic in origin our prognosis is highly unfavorable. If the lesion is traced to some disease of childhood or endo-carditis, the general system is to be consulted as to dyspnoea, dropsy, Bright's disease and the probable flagging of the muscular walls of the heart bordering on dilatation.

Suppose we picture to ourselves another case in the early teens with a mitral lesion and compensation due to endo-carditis in pneumonia ordinarily developed physically and in good health. Little danger can attend a failure of the heart in this person unless overtaken by an acute condition of the lungs or endocardium; hence the forecast is favorable; whereas, on the other hand if the subject is anemic, has symptoms of oedema, even though in fair health, our prognosis is always attended with danger.

It is in chronic cardiac disease, more than in any other disease, we see the disease and repair in the balance of disability and compensation, which must be maintained in every damaged organ; if health has been disturbed its restoration is dependent on every condition and event of life, and a readjustment of all disobeyed natural laws.

The practitioner cannot hope to forecast altogether from the etiology and pathology alone, but largely by that knowledge of the individual man, and of the world that permits the practitioner to pick the roses on the plane of eminency.

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## THE JOINT MEDICAL COUNCIL AND MUNICIPAL HOSPITAL REFORM.\*

BY JOHN GREEN, JR., M. D.

SECRETARY OF JOINT MEDICAL COUNCIL.

During the past ten years the Medical profession of St. Louis has been growing more and more aware of the glaring defects of the system under which, by the provisions of the Charter and ordinances, our city has been compelled to conduct its hospitals. Efforts have been made to remedy these defects, but, up to the present time, without success.

In 1905 every Medical Society in the City was invited by the Medical Society of City Hospital Alumni to join with it in a concerted effort to find a solution to this problem. Every Society invited responded enthusiastically and appointed delegates on the basis of one delegate to each one hundred members. These delegates, nineteen in number, representing Allopaths, Homeopaths, Eclectics and Dentists,

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\*Delivered February 19th, before a Joint Committee of the Council and House of Delegates in support of a bill authorizing the election of Freeholders to prepare a new charter for St. Louis.

organized the "Joint Medical Council," which body represents about fourteen hundred physicians and dentists. The Council set to work at once to determine in what respects the system operative locally was not abreast of the times.

A comparison with the systems in other American cities notably, Chicago, Cincinnati, New York, Boston, and New Orleans, revealed the startling and disconcerting fact that in no single respect did the St. Louis system accord with the fundamentals of good management in vogue elsewhere. We found that our system was utterly obsolete and had long since been discarded by communities one quarter the size of St. Louis.

Let us take for example the Cincinnati hospital, which fairly represents modern ideas of municipal hospital control, and compare it with the local system. In Cincinnati, control is vested in a Board of Trustees appointed by the Mayor. In St. Louis, control is vested in a single individual, the Health Commissioner. In Cincinnati, the care of the sick is entrusted to a large Medical staff representing the *specialties of medicine* and is appointed by the Board of Trustees. In St. Louis there is no provision for a medical staff and one does not exist. In Cincinnati the superintendent, who is appointed by the Board of Trustees, is the executive head of the hospital. He is not a physician and has nothing to do with the care of the sick. In St. Louis the superintendent is appointed by the Mayor. He is the Medical and Surgical as well as the executive head of the hospital. He is, in theory, responsible for the medical care of every patient. In Cincinnati, the internes or house physicians are appointed by the Board of trustees, after competitive examinations conducted by the Medical staff. In St. Louis the internes are appointed by the Health Commissioner after competitive examination conducted by the Board of Health. In Cincinnati, all the non-medical employees are appointed by the Board of Trustees. In St. Louis all the non-medical employees are appointed by the Health Commissioner.

The brief time at my disposal will not permit me to make other comparisons. Suffice it to say that after careful study the Joint Medical Council has concluded that the most glaring defects of the local system are as follows:

- (1) The intimate association of two departments inherently distinct—the Health Department and Hospital Department.
- (2) The vesting of control over all hospitals in a single individual—the Health Commissioner.
- (3) The requirement that the Medical and Surgical superintendent shall be at the same time the executive head of the hospital.
- (4) The lack of a Medical staff of experienced physicians and surgeons representing the various specialties.
- (5) The failure of the institution to subserve its proper function in the sphere of medical education and medical research.



(6) The Failure of this institution to give the patients a medical care equivalent to what they receive in similar institutions in other cities.

It was at first thought that new ordinances framed in the light of modern medical enlightenment might suffice to overcome these defects, but closer investigation revealed the fact that the root of the evil lay in Art. XII. Sec. 5 of the City Charter, which unequivocally declares that the Health Commissioner shall have charge of all City hospitals and make all necessary rules for their government, etc.

It is thus seen that the Charter itself is the chain linking the Health Department to the Hospital Department, and that the Charter itself must be changed to permit the creation of a scheme of organization in consonance with modern ideas of city hospital control.

The labors of the Joint Medical Council have, therefore, been devoted to preparing an amendment to Art. XII. Sec. 5, of the City Charter. The draft, as finally agreed upon, was referred back to the Societies represented and received the unanimous endorsement of each and every one. Its principal features are as follows:

(1) A provision that the Hospital Department shall be absolutely separate from the Health Department.

(2) That the new Hospital Department shall be managed, directed and controlled by a Board of Trustees.

(3) That control over the hospitals, Insane Asylum and Poor House shall be vested in this Board of Trustees.

(4) That this Board shall consist of six citizens, together with the Mayor ex-officio. Said Board to be elected on a general ticket.

(5) That the Board shall establish rules and regulations for the institutions, shall appoint and remove employees, shall appoint a Medical staff of attending and consulting physicians and surgeons who shall serve for a term of two years, shall appoint internes on nomination by the Medical staff on the basis of competitive examination conducted by the staff, shall elect annually for each of the hospitals a superintendent whose duties shall be of a general administrative and executive, but non-medical character.

It is not necessary to remind you of the frightful way in which our municipal hospitals have been prostituted to political ends. The more they have decreased in efficiency as institutions for the care of the sick the more have they become valuable political assets. We have been assured that our municipal hospitals have become so firmly imbedded in the political life of the city that to dislodge them would be truly a Herculean task and one well nigh impossible. We are not so pessimistic. We believe that when the citizens of St. Louis realize, that, as tax-payers, they are not receiving from these institutions an adequate return for moneys expended, that the physicians of the City are deprived of the high privilege of ministering to the City's charges, that the sick poor are not receiving the medical care to which they are

rightly entitled, they will demand, in no uncertain tones, that the present system be changed. We believe that all right minded citizens will voice the feeling expressed by Mr. John Fehrenbatch, Superintendent of the Cincinnati hospital, "that in the name of common decency and humanity, politics in any guise should not for one instant be tolerated in institutions where human health and human life are at stake."

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"APPENDICITIS."

Appendicitis is now the style.  
Get it my friend and try it a while.  
The operation is awfully nice,  
And all that hurts is the doctor's price.  
But these little things are worth the while  
When your appendix gets into style.

The anesthetic I liked the best  
Cause you go to sleep and get some rest  
And that's all the rest you get for a while  
When your appendix gets into style.

Flat on your back you have to lie  
Survive or perish, live or die.  
But these little things are all worth while  
When your appendix gets into style.

Nasty doses you'll have to take  
And you must endure the stomachache,  
But the thing that rejoices you most of all  
Is to have your appendix in alcohol.  
Now these little things are all worth while  
When your appendix comes into style.

—*Anonymous.*

# Journal Missouri State Medical Association

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E. J. GOODWIN, M. D., EDITOR.

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C. M. NICHOLSON,

WALTER B. DORSETT.

B. M. HYPES.

W. G. MOORE.

## EDITORIAL.

### THE POST-DISPATCH AND MEDICAL LAWS.

The *Post-Dispatch* takes occasion to raise a puerile cry against the passage of the medical practice act, now before the House of Representatives. In no uncertain terms it accuses the medical profession of an attempt to monopolize fees for medical services, and asserts that the bill is drawn, not in the interests of the public but for the material benefit of practitioners of medicine. With much gravity it advocates the passage of strict State laws to govern the acts of those persons who spend from four to six years in medical colleges and post-graduate work in preparing themselves for a life of sacrifice and labor to alleviate the sufferings of mankind, and who believe and teach that drugs and the knife are useful instruments in their work: that doctors of medicine should be required by statute to demonstrate their fitness to practice their profession and none but competent persons in the medical fraternity should be permitted to administer drugs or use the knife in the care and treatment of the sick. Having done this and having provided wise sanitary laws, the *Post-Dispatch* tells us, the State has done its whole duty. All other persons who choose to do so, should be permitted to treat the sick, unhampered by troublesome legal restrictions.

In other words the *Post-Dispatch* would have the State admit within its borders all the fakers, charlatans, faith curers, drugless healers, manipulators, mesmerists, and what not, legalize their acts, give them every privilege to extort money from the sick and afflicted by extravagant promises of positive cure, and permit them to treat the sick and afflicted, if only they will eschew the use of drugs and discard the knife.

Upon the medical professions rests the responsibility of protecting the public from the ravages of disease and they should be clothed



with every necessary power to enable them to do this. No set of therapeutic nihilists could be trusted with this grave duty. And no system of healing which ignores the study of physiology, anatomy, chemistry, diagnosis, therapeutics, pathology and bacteriology, should be legitimized in this State.

The medical profession makes no complaint of any person who desires to be treated without drugs, or chooses to endure an affliction which the knife would relieve. He who chooses to lie down and die rather than take drugs, or submit to a surgical operation, for relief, may do so, with or without the attendance of a drugless, knifeless assistant, and no physician will enter a protest. But the medical profession has very proper grounds for objection and does most strenuously object to the legalizing of persons to practice any system of healing as a profession unless those persons have a thorough knowledge of the body in health and in disease, and prove themselves competent in the application of this knowledge.

Since writing the above the medical practice act has been passed by the House of Representatives and is now ready for the Governor's signature. It will become a law sixty days after being signed.

#### THE PATHOLOGICAL EXHIBIT.

On February 9th, 1907, twelve men, representing the special committees on pathology from various medical societies and schools, met in the board room of the St. Louis Medical Society. The following will form the nucleus of the Pathological Exhibit which is to be the new feature of the scientific work at the coming State Meeting:

The Committee of the St. Louis Medical Society will endeavor to present a comprehensive picture of the malignant growths showing the pathology in gross and in microscopic specimens, and illustrations.

The St. Louis University will make an exhibit of anatomical specimens and dissections based on the collection which took the prize at the St. Louis World's Fair.

The Washington University Committee promises a comprehensive exhibit of lesions of tuberculosis in general.

The College of Physicians and Surgeons of St. Louis will exhibit its splendid collection of ophthalmological specimens, both normal and pathological.

The Jackson County Medical Society will present specimens of hypernephroma.

The Barnes Medical College will have an exhibit, the nature of which is now under discussion.

Professor Jackson of the University of Missouri will exhibit wax reconstructions of the embryo and embryonic organs. Professor Green will exhibit tracings made in the physiological laboratory.

Dr. Herman von Schrenk has consented to present an exhibit

and address the Association on Plant Pathology.

The exhibit will include microscopic and lantern slide demonstrations. The committee has heard from a number of men from all over the state, and it is ready to hear from others who have specimens that might be desirable to enter in the exhibit. Arrangements will be made for the safe-guarding of all specimens and apparatus exhibited during the progress of the meeting, and the Program Committee guarantees that every reasonable protection will be afforded against damage or loss.

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### THE PROGRAM.

On another page we publish the program for the next annual meeting at Jefferson City. This represents all the papers that have been promised up to this time. We anticipate that there are a number of other members who will read papers, and we urge upon them to inform the secretary at the earliest possible date of their intention and announce the title of their paper. Next month we shall publish the full program of the meeting and it is hoped that every member who desires to read a paper before the meeting of Jefferson City, will send the title of his paper so that it can be published in the next issue of the Journal.

The pathologic exhibit promises to be an interesting and instructive feature of the meeting. An announcement of the preparations thus far made will be found on another page of this issue.

A list of the Delegates elected by the various societies as far as reported up to the time of going to press is published on the page following the list of papers to be read. All Societies that have not yet elected their Delegates should do so at their next meeting and send the name and address of the Delegate to the State Secretary.

The members of Cole County Medical Society constitute the Committee of Arrangement. All those who attended the last meeting of the Association will recall with much pleasure the splendid manner in which the members were entertained at the meeting in 1906, and for those who attend the 1907 meeting we can promise that every attention will be given to their comfort and enjoyment during the meeting.

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### SMALLPOX AT JEFFERSON CITY.

An epidemic of smallpox in Jefferson City caused considerable excitement among the citizens and visitors for a few days. Exaggerated newspaper reports and unfounded local rumors spread considerable alarm among the members of the Legislature and for a while there was some talk of adjourning the session to another city, particularly after it was known that several members and employees of the House had been stricken with the disease. The state board of health was called to Jefferson City but they found that the local au-

thorities had instituted proper measures to prevent the further spread of the disease. However, all places of amusement were ordered closed and large public gatherings were prohibited as a special precautionary measure, and a quarantine hospital was established.

The epidemic is of a mild character; no deaths have occurred and those who were attacked with the disease were not seriously ill. About thirty-six cases have been reported.

The outbreak serves to emphasize the need of county boards of health. In such a time the health officer is necessarily greatly overworked and unless he be a man of unusual ability, sound judgment and prompt in action, the situation might easily get beyond his control. An efficient board of health in every county, working under the control of the state board of health, would be a great aid in safe-guarding the health of the community.

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#### WEBSTER COUNTY ORGANIZED.

Through the efforts of Dr. T. A. Coffelt, Councillor for the 25th District, Webster County was organized on February 27th. This leaves but two counties unorganized in the 25th District. Dr. Coffelt is to be congratulated upon the effective work he has done in the 25th District since his appointment as Councillor.

Webster County comes into the Society with twelve charter members. Their names and addresses will be published as soon as we receive them. The officers are as follows: President, H. Highfill, Marshfield; vice-president, Wm. J. Rebenau, Fordland; secretary, Wm. R. Beattie, Rogersville; treasurer, E. N. Bailey, Elkland.

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#### PENNSYLVANIA RAISES THE REQUIREMENTS FOR ADMISSION TO MEDICAL SCHOOL.

Recognizing the advantages of a broader general education and the growing necessity of the prospective student having in addition special preparation for the study of medicine, the Board of Trustees of the University of Pennsylvania has decided recently to raise the requirements for admission to its medical school. These requirements include two years of general college training and in addition a certain knowledge of biology, chemistry and physics. According to the plan which has been adopted, the standard will be raised gradually, beginning with the academic year 1908-1909 and reaching the maximum 1910-1911.



## OBITUARY.

DR. BENJAMIN GIVENS DYSART.

Dr. B. G. Dysart was born in Randolph County, Missouri, in 1838. He was the son of Hon. Nicholas G. Dysart, one of the pioneer citizens of this state. He received his early education in the common schools of the county and finished in the college of the Presbyterian church, of which he was the faithful physician and surgeon after his return from the Confederate Army in 1865. He began the study of medicine in 1856 under the guidance of Dr. Richard Kayte Lewis, an eminent physician of North Missouri. After his studies under Dr. Lewis were completed he entered Jefferson Medical graduating in 1859.

When in 1861, "the loud tocsin of war tolled its first alarm," Dr. Dysart entered the service of the South and continued therein until the Appomatox of 1865. He was Brigade Surgeon on Gen. Cockrell's staff. On all battlefields he displayed skill and energy in the care of the wounded, faithfully administering to those of both armies. He was brave, vigilant, fearless, prudent and conservative in all his attentions.

As President of the State Board of Health and also when Surgeon General of Missouri, he was prompt and punctual in the discharge of his official duties. As a civil surgeon his professional brethren all over the state will remember his timely aid and assistance. In consultation he was always safe, sensible and reliable. The worthy and needy poor never had a warmer or truer friend. As a father, husband, citizen, neighbor and Christian he was all that one could ask or expect. He died at his post of duty in Paris, Mo., loved and honored by all.

C. W. W.

## PRELIMINARY PROGRAM.

Next Annual Meeting, Jefferson City, May 14, 15, 16, 1907.

- J. M. Allen, M. D. .... Liberty  
 "Tuberculosis a Communicable Disease."
- W. S. Allee, M. D. .... Olean  
 "Duty of a Practitioner."
- W. M. Bayliss, M. D. .... Columbia  
 "The State Sanitarium."
- G. A. Beedle, M. D. .... Kansas City  
 "Carcinoma of the Breast."
- T. L. Bradley, M. D. .... Warrensburg  
 "Let Us Get Closer to the People."
- O. H. Brown, M. D. .... St. Louis  
 "Treatment of Pneumonia."
- J. D. Brummall, M. D. .... Salisbury  
 "Let Us Get Closer to the People."
- J. Robert Buchanan, M. D. .... Nevada  
 "Some Reflections Concerning the General Practitioner."
- A. B. Burgwin, M. D. .... Fayette  
 "The Duty of the Examining Surgeon for Life Insurance Companies."
- R. D. Carman, M. D. .... St. Louis  
 "The Value of the Roentgen Rays in the Diagnosis of Renal and  
 Ureteral Calculi."
- H. S. Crawford, M. D. .... Harrisonville  
 "Attitude of the Public Toward the Doctor."
- R. O. Cross, M. D. .... Kansas City  
 "Consumption and Civilization."
- H. E. Derwent, M. D. .... Clinton  
 "The Eye and the Nervous System."
- F. Devilbiss, M. D. .... Spring Garden  
 "Local Medical Organization."
- Walter B. Dorsett, M. D. .... St. Louis  
 Title not announced.
- T. H. Doyle, M. D. .... St. Louis  
 "Have We Any Infallible Signs, Symptoms or Methods by Which We  
 Can Diagnose Typhoid Fever Earlier Than the End of  
 the First Week?"
- H. E. Dunlop, M. D. .... Canton  
 "Medical Education; Preliminary and Professional."
- W. T. Elam, M. D. .... St. Joseph  
 "The Myomectomy vs. Hysterectomy in the Surgical Treatment of  
 Uterine Fibroids."
- Wm. Frick, M. D. .... Kansas City  
 "Some Forms of Scabies Seen in Private Practice."
- C. E. Fulton, M. D. .... Springfield  
 "The Surgical Treatment of Enlarged Prostate."
- C. G. Geiger, M. D. .... St. Joseph  
 "Inguinal Hernia."
- O. G. Gleaves, M. D. .... St. Joseph  
 "The Neglected Side of the Profession."

- John Green, Jr., M. D.....St. Louis  
 "A Plea for the Cross-Eyed Child."
- R. H. Goodier, M. D.....Hannibal  
 Title not announced.
- C. B. Hardin, M. D.....Kansas City  
 "What We Have and What We Should Have of Medical Law Gov-  
 erning the Practice of Medicine."
- R. D. Haire, M. D.....Clinton  
 "Local Anesthesia."
- James Hanks, M. D.....Brashear  
 "Autointoxication."
- Geo. Homan, M. D.....St. Louis  
 "Sanitation and Tuberculosis."
- W. U. Kennedy, M. D.....St. Louis  
 "Cholecystectomy vs. Cholecystotomy."
- C. C. Leeper, M. D.....Braymer  
 Title not announced.
- P. I. Leonard, M. D.....St. Joseph  
 "The Tonsillar Ring as an Etiological Factor in Diseases of the Ear,  
 Nose and Throat."
- T. F. Lockwood, M. D.....Butler  
 "Medical Scraps."
- W. J. McGill, M. D.....St. Joseph  
 "Stricture of the Rectum."
- T. E. Potter, M. D.....St. Joseph  
 "Mastoid Abscesses and Their Sequellæ."
- William Porter, M. D.....St. Louis  
 "Civic Responsibilities."
- John Punton, M. D.....Kansas City  
 "A Plea for the State Care of Nervous Individuals."
- C. F. Roberts, M. D.....Kansas City  
 "A Few Points Relative to Prostatectomy."
- J. D. Seba, M. D.....Bland  
 "Tubercular Peritonitis."
- J. N. Scott, M. D.....Kansas City  
 "Present States of X-Ray Treatment of Malignant Growths."
- R. Winn, M. D.....Ilasco  
 Title not announced.
- L. M. Warfield, M. D.....St. Louis  
 "Early Diagnosis of Tuberculosis."



## DELEGATES.

COUNTY.	NAME	ADDRESS.
Adair.....	Jas. Hanks.....	Brashear.
Andrew .....	E. C. Bennett.....	Bolekow.
Barton .....	T. H. Duckett.....	Milford.
Bates .....	T. C. Boulware.....	Butler.
Caldwell .....	W. L. Lindley.....	Hamilton.
Chariton .....	Oliver McEwen .....	Shannondale.
Clinton .....	J. A. Franklin.....	Cameron.
Cooper .....	R. L. Evans.....	Boonville.
Grundy.....	W. D. Fulkerson.....	Trenton.
Henry .....	J. R. Hampton.....	Clinton Ford.
Howard .....	C. O. Lewis.....	Fayette.
Howell .....	J. W. Gingham.....	Pottersville.
Jackson.....	F. L. Cook.....	Kansas City.
	N. P. Wood.....	Independence.
	J. M. Frankenburger...	Kansas City.
	Wm. J. Frick.....	Kansas City.
Johnson .....	F. E. Murphy.....	Kansas City.
	T. L. Bradley.....	Warrensburg.
Knox .....	H. Jurgens .....	Edina.
Lawrence-Stone .....	C. A. Moore.....	Aurora.
Lewis .....	H. E. Dunlap.....	Canton.
Linn.....	J. P. Oven.....	Brookfield.
Marion.....	Thos. Chowning.....	Hannibal.
Mississippi .....	A. W. Chapman.....	Charleston.
Moniteau .....	W. R. Patterson.....	Tipton.
Newton.....	R. C. Lanson.....	Neosho.
Nodaway.....	F. R. Anthony.....	Maryville.
Platte .....	S. Redman .....	Platte City.
Putnam .....	J. A. Townsend.....	Unionville.
Schuyler.....	J. D. Bridges.....	Downing.
St. Francois .....	F. L. Keith.....	Flat River.
St. Louis City.....	Paul Y. Tupper.....	St. Louis.
	J. C. Morfit.....	St. Louis.
	Jesse S. Myer.....	St. Louis.
	Wm. W. Graves.....	St. Louis.
	John Green, Jr.....	St. Louis.
	W. H. Stauffer.....	St. Louis.
	M. B. Clopton.....	St. Louis.
Worth.....	F. L. Henderson.....	St. Louis.
	H. W. Soper.....	St. Louis.
	W. E. McKinley.....	Denver.

The above represents the list of Delegates reported to date of going to press. We urge those Counties not represented in the above list to elect their delegates as soon as possible and forward the name and address of the delegate to the State Secretary.

## COUNTY SOCIETY NOTES

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### BUTLER COUNTY MEDICAL SOCIETY.

The regular meeting of the Butler County Medical Society was held at Poplar Bluff on February 22.

Dr. Rowe read a paper entitled "The Physician a Debtor to the Organized Profession." On motion Dr. Rowe, as reporter of the Society, was instructed to send his paper to the Journal of the State Medical Association requesting that it be published in the State Journal. After some discussion of the paper by Drs. Norwine, Seybold, Smith and Crump, the Society adjourned.—ALFRED R. ROWE, M. D., Secretary.

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### CAPE GIRARDEAU COUNTY MEDICAL SOCIETY.

Cape Girardeau County Medical Society was called to order by vice president, Dr. Wichterich. There were eleven members and three visitors present.

The following program was rendered: "Pneumonia," by Dr. G. W. Tarlton. "Treatment of Pneumonia," by Dr. H. Hope. "Broncopneumonia in Childhood," by Dr. A. E. Dalton. Each paper was opened for general discussion.

Our society meets regularly on the first Friday of each month. Next place of meeting, Cape Girardeau, March 1st.—E. H. G. WILSON, M. D., Secretary.

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### GREENE COUNTY MEDICAL SOCIETY.

#### MEETING OF JANUARY 25TH.

The society as the guests of the newly elected President Dr. J. R. Boyd, met at the Springfield Club on January 25th. Thirty members and five visitors were present. After a short social session the society adjourned to the Banquet Hall where after partaking of the many good things provided for the physical man, the following toasts were responded to: "The Therapeutics of the Future," by Dr. E. C. Fulton; "The Family Physician Past and Present," by Dr. F. E. Ross; "The Doctor as a Business Man," by Dr. H. S. Hill; "The Doctor as a Scientific Moralist," by Dr. W. M. Smith; "To See Ourselves as Others See Us," by Dr. J. E. Tefft; "The Light that Failed," by Dr. D. B. Farnsworth; "The Poetry of Medicine," by Dr. W. A. Camp; "The Good Greek Doctor," by Rev. J. W. Stewart; "The Upbuilding of Medicine," by Dr. N. P. Wood.—J. L. ORMSBEE, M. D., Secretary.

## MEETING OF FEBRUARY 8TH.

The Society met in regular session. Dr. T. A. Coffelt, of the committee on proposed amendment of law, on criminal abortion, reported that they approved of said amendment and had written the Greene county representatives asking them to support same. President Boyd appointed the following committees for 1907: On Program and Scientific Work, Drs. W. P. Patterson, T. A. Coffelt, and W. M. Smith; on Public Health and Legislation, Drs. C. E. Fulton, W. A. Camp and S. W. Tickle.

Upon application with a proper transfer card Dr. B. F. Fortner was elected to membership in the society. The name of Dr. N. P. Wood, of Independence, Mo., was proposed for Honorary membership in the society and upon motion he was duly elected to membership.

Dr. W. A. Camp reported an interesting case of a man with pain behind his ear which gradually grew worse and almost unbearable; operation for abscess was advised but before operating he introduced a catheter through eustachian tube into the inner ear and produced suction thus removing a little thick, tenacious mucous which relieved the pain and patient recovered.

## SYNOPSIS OF PRESIDENT'S ADDRESS.

This society does not hold the position here that it should or could. It is now over 30 years old, and while it has done its members much good the profession at large and community have not received the benefits that the society can and should give them. With the increased activity of our city in a commercial way this society should become more active.

The public is beginning to appreciate the medical profession more than in the past and we should grasp the opportunity and push ahead for greater things and be of more benefit to ourselves and the community at large.

With our excellent educational institutions, a graduate of which is credited in the St. Louis Medical Colleges with two years study, and with our four hospitals there is no reason why we cannot provide the other two years of study and thus have a complete medical college here.

I fully realize the responsibility of this Society and with your assistance and co-operation we can accomplish much in 1907.

## MEETING OF FEBRUARY 15TH.

At this meeting, Dr. N. F. Terry read a paper on "The Relation of Pelvic Diseases to Insanity," which was discussed extensively. Those who took part in the discussion were: Drs. Fulton, Coffelt, Smith, Fortner and others.

The question of holding an open session of the society was dis-



cussed and a committee appointed to arrange a program. The date for the open meeting was left to the committee, but it will be held in the very near future, at a place to be decided later.

The general public will be extended a cordial invitation to be present. At the meeting last night five new members were taken into the society. The society is starting the new year under favorable conditions and much good is expected to be accomplished.—J. L. ORMSBEE, M. D., Secretary.

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### HOWARD COUNTY MEDICAL SOCIETY.

Howard County Medical Society met at Fayette on February 21st with seven members in attendance.

Dr. Lewis presented a patient, a child which had been having convulsions, and outlined his treatment which was successful.

Dr. Watts read a paper entitled "Suggestions to County and State Boards of Health."

Dr. Lewis made a motion, which prevailed, that the State Legislature be memorialized to appropriate a sufficient amount out of the \$478,000 due the state from the Government, to establish and maintain at Columbia a laboratory for the production of antidiphtheritic and anitetanic serum and for distribution among the people at cost of production.

The committee on the case of Dr. Todd reported and the report was accepted. The secretary was instructed to forward the report and the petition to the Governor, through Judge Rich of the State Society.—C. W. WATTS, M. D., Reporter.

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### JACKSON COUNTY MEDICAL SOCIETY.

#### MEETING OF JANUARY 8TH.

At this meeting 27 members were in attendance. Dr. H. C. Crowell was granted a letter of withdrawal on account of change of location.

Dr. E. G. Mark presented a case of argyria and also a case of congenital hydronephrosis. The discussion on these cases was opened by Dr. C. J. Morrow.

Dr. Calvin Atkins read a paper on the "Treatment of Cough," the discussion on this paper being opened by Dr. W. M. Reed.

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#### MEETING OF JANUARY 15TH.

The scientific program consisted of the following papers: "Some Facts About Vaccination," by Dr. Eugene Carbaugh; discussion opened by Dr. R. E. Castlelaw.

"Psychology of Smallpox," by Dr. W. K. Trimble; discussion by Dr. Robert B. Brewster.

## MEETING OF JANUARY 22ND.

Dr. Ernest Robinson read a paper entitled "Appendicitis During Pregnancy," the discussion on this being opened by Dr. C. A. Ritter. Dr. St. Elmo Sanders read a paper on "Spinal Analgesia," Dr. H. E. Pearse opening the discussion.

## MEETING OF JANUARY 29TH.

This meeting was devoted to clinical cases and the exhibition of specimens. Dr. E. H. Skinner presented skiagraph pictures of fractures of the forearm; Dr. A. J. Florian presented a patient with mediastinal tumor, probably a sarcoma; Dr. Noah Adam presented a case showing the after effects of ophthalmia neonatorum. Dr. W. H. Coffey presented a case of congenital malformation of the rectum in a child who had for six years passed bowel contents through the vagina; operation had been performed by Dr. Coffey and the bowel brought into its normal situation, the false opening into the vagina being closed at the same time. The operation was entirely successful. The patient presented another anomaly in having a double vagina.

Dr. J. F. Binnie presented a specimen of gastric cancer giving a history of the case; Dr. J. P. Kanoky a case of psoriasis punctata; Dr. Maggie L. McRae a pessary through which had occurred a hernia of the vaginal wall and part of the bladder.

## MEETING OF FEBRUARY 5TH.

A letter was read from Dr. J. W. Kyger, who is quite ill, thanking the members for attentions shown him. A communication from Dr. J. A. B. Adcock was also read and ordered filed. Drs. H. P. Wheritt and H. N. Carver, whose applications for membership had been reported favorably, were elected to membership. The applications of Drs. R. E. Lowe and Owen Krueger were referred to committee. A motion carried that the Society express their sincere regrets on account of the illness of Dr. G. W. Grove. In consideration of the long and useful life in the society of Dr. Geo. Halley, together with his recent decline in health, it was ordered upon motion, that the Society remit to the State Association his annual dues for 1907. Dr. Balsley, now in California on account of ill health, was granted a transfer card and declared in good standing up to April 1, 1907.

The essayists for the evening being absent, cases were reported by Dr. R. P. Sloan, Dr. Froehling and Dr. Chambers. The cases were discussed by Drs. R. M. Schauffler, Dr. Murphy and Dr. Langsdale.

## MEETING OF FEBRUARY 12TH.

Dr. J. N. Scott reported a case of epithelioma of the face treated by the x-ray with most favorable results. Drs. Fryer and Lisle discussed the condition. Dr. A. J. Florian presented a case of myxedema. About a year ago the patient had submitted to operation at

which time the thyroid gland had been completely extirpated. Drs. Hays, Jackson and Hannawalt took part in the discussion that followed.

Dr. W. F. Kuhn read a paper entitled "Scientific Medicine vs Boarding Houses in the Treatment of the Insane." He advanced the theory that insanity is largely if not almost always the result of metabolic toxemia and this seemed strongly apparent when the results of blood findings were compared to those obtained in cases of undoubted toxemia. Dr. Murphy and Dr. Frank Hall, Dr. Fryer and Dr. Child discussed the paper.

#### MEETING OF FEBRUARY 19TH.

The application of Dr. F. W. Froehling was referred to the membership committee. Drs. Robert E. Lowe and Anton G. Frye were elected members of the Society. An invitation from the Kansas City Surgical Society asking the members to attend the banquet and smoker to be given in honor of Drs. F. Gregory Connell and Van Buren Knott, was read.

The scientific program consisted entirely of papers from oculists. The following were read:

"Post-Operative Complications of Cataract," by Dr. J. H. Thompson. "Epi-Sclero-Keratitis," by Dr. Schutz. "Stricture of the Nasal Duct," by Dr. D. L. Shumate.

#### MEETING OF FEBRUARY 26TH.

The application of Dr. Walter J. Lowery was referred to the membership committee. A letter of withdrawal was granted Dr. L. L. Cooke, now of Muskogee, Ind. Ter.

The scientific work of the evening consisted entirely of cases reported by various members, no formal papers being presented.—E. L. STEWART, M. D., Secretary.

#### LACLEDE COUNTY MEDICAL SOCIETY.

The Laclede County Society met at Lebanon, on January 14th. Eight members being present.

On motion a communication from Kentucky referring to Life Insurance examinations was read and the resolution adopted. On motion the secretary was instructed to notify our representative in the Legislature, Hon. Wm. H. Butts, that this society unanimously endorsed the bills on Abortion and Pure Food which were recommended by the State Board of Health.

Dr. J. A. Pinckard read a paper "Pain in the Ovaries." The following officers were elected for the year 1907. President, J. A. McComb; secretary, J. A. Pinckard; treasurer, T. B. Herbert; delegate to State Society, J. M. Billings; member of legislative committee, J. A. McComb.

The following resolutions were unanimously adopted:



"Whereas: We have the information that there are a number of men who are illegally practising medicine in Laclede County, writing prescriptions, etc., where they are doing so in direct violation of the statutes of our state, and bringing into disrepute the legally authorized practitioners of medicine and surgery and disgrace upon the profession, therefore be it

Resolved: 1st. That we agree to do all we can to bring to justice such lawbreakers, and hereby pledge ourselves as most earnestly opposing such practise, and

Second: That we urge our Prosecuting Attorney, Mr. I. W. Mayfield, to prosecute such violators at the earliest opportunity and we recommend that he insist on as near the maximum fine in such convictions as can be secured.

Third: We believe the general public is in full sympathy with us in the protection of the lives of our citizens."—J. A. PINCKARD, M. D., Secretary.

#### ST. GENEVIEVE COUNTY MEDICAL SOCIETY.

The regular monthly meeting was held in St. Mary on, February 13th.

Dr. Rutledge gave a clinical report of an obscure case which was generally discussed.

Dr. J. A. Wilkins presented a paper on "Indications for Diuretics," with the anatomy and physiology of the Kidneys, which was very interesting.

Letter was read from Creasy L. Wilbur, M. D., Chief Statistician Department Commerce and Labor, Bureau of the Census, Washington, D. C.

Letter from Louis M. Wakefield, chief physician of St. Louis Society for Relief of Consumption, requesting county societies to aid in the fight against consumption was also read.

For next meeting, Dr. Rutledge was appointed to prepare a paper on "Digestion and Assimilation" and Dr. Hertich, one under the head of "Clinical Report of Cases."

No further business appearing, the society adjourned to meet in St. Genevieve, second Wednesday in March, at 8 a. m.—R. W. LANNING, M. D., Secretary.

#### ST. LOUIS COUNTY MEDICAL SOCIETY.

The St. Louis County Medical Society held a meeting February 13th, at Kirkwood, with seventeen members present.

The Society endorsed a bill pending in the Legislature relative to a System of Collecting Vital and Mortuary Statistics, and a System of Reporting and Controlling Contagious Diseases.

This bill is recommended by the State Board of Health and indorsed by the Committee on Public Health and Legislation of the State Medical Association.

Dr. W. H. Townsend read an interesting paper on "Some Observations of Gallstone Disease and Treatment."

Dr. N. N. Jensen read a good paper, "The Chologogues," covering his subject in a scientific manner. The papers were ably discussed.

Dr. Howard Carter presented some specimens of gallstones and demonstrated the chemical reaction for the presence of bile in urine.

Drs. H. T. Lucas, of Bridgeton, and Horine Miles of Old Orchard, were elected to membership.

Dr. A. V. Campbell requested transfer card to St. Louis Medical Society which was granted.

The program for March promises papers entitled, "The Present View of Rheumatoid Affections" and "The Digitalis Group" by P. M. Brossards and N. E. Metcalfe respectively.—R. D. MOORE, M. D., Reporter.

### ST. LOUIS MEDICAL SOCIETY OF MISSOURI.

The Executive Committee of the St. Louis Medical Society have submitted prepared programs for meetings as follows:

#### FEBRUARY 23RD.

Clinical and Pathological Meeting.

Presentation of Cases and Specimens Illustrating Lesions of the Heart and Aorta.

#### MARCH 2D.

Dermatological Meeting on Syphilis.

#### MARCH 9TH.

Symposium on the Prostate.

#### MARCH 16TH.

Medical Inspection of Public Schools.

#### MARCH 23RD.

Early Manifestations and Diagnosis of Incipient Pulmonary Tuberculosis of the Lungs.

#### MARCH 30TH.

Pediatric Meeting.

#### APRIL 6TH.

Renal Calculi and Hematuria.

On behalf of the Society we extend to members of the various county societies who happen to be in St. Louis on Saturday night a cordial invitation to attend the meetings of the St. Louis Medical Society.

#### OPHTHALMIC SECTION.

The recently organized Ophthalmic Section of the St. Louis Medical Society held its inaugural meeting February 13, 1907, in the Board room of the Medical Library Building, 3525 Pine street.

The interest manifested by the ophthalmologists of the society in this Section is attested by the fact that 20 out of a total present membership of 25 were present.

The Chairman, Dr. Barck made a few introductory remarks pointing out the need of an organization like the Ophthalmic Section to supply the scientific requirements of specialist members in a general medical body. He felt that nothing but good could accrue from this move and asked the hearty co-operation of the members in the scientific work of the section.

Dr. W. A. Shoemaker showed a patient with a gun-shot wound of the globe, and exhibited x-ray photographs, showing a bullet in the globe.

Dr. J. M. Ball showed a patient with diabetic retinitis. Dr. Wiener discussed the x-ray localization of foreign body within the globe, by Sweet's method.

In the discussion, Dr. Wells, Roentgenologist to the Skin and Cancer Hospital, demonstrated Sweet's method together with a valuable modification of his own. At the conclusion of the discussion Dr. Wells was invited by the Section to prepare a formal paper on Sweet's method as modified by him for presentation at the next meeting.

Dr. N. M. Semple described an operation for the relief of symblepharon, with the aid of paraffine plates.

Dr. Green demonstrated the astigmatic charts of Dr. F. H. Verhoeff.

Dr. Ball read a paper entitled "A Sketch of the Life of George Frick" (Author of the first American text book on ophthalmology.) The following number were present:

Drs. Barck, Charles, Jennings, C. Loeb, Muetze, Buckwalter, Gross, Henderson, Higbee, Semple, William, Luedde, Owen, Reinders, C. W. Parker, Wiener, W. A. Shoemaker, J. M. Ball, John Green, Jr. Visitors: Drs. Hoge, Wells, Wm. W. Graves.

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## NEW AND NON-OFFICIAL REMEDIES.

The following articles have been tentatively approved by the Council on Pharmacy and Chemistry of the American Medical Association. The list will be revised by adding other articles as accepted and by omitting any which on further investigation may be found to conflict with the rules of the Council.

Following the name of each article is the name of the manufacturer or, in case of foreign products, of the American agent; where no name is given the article is believed to be neither protected by patent nor trademark. The date following the article refers to the preliminary publication in *The Journal A. M. A.* When no date is given the description has not yet been published. This list, brought up to date, will appear in the first issue of each month.

- Acetone (P. D. & Co.) Sept. 15, 1906.  
 Acetone Inhalant (P. D. & Co.) Sept. 15, 1906.  
 Acet-theocinsodium (Cont. Color and Chem. Co.), Sept. 15, 1906.  
 Adnephrin Emollient (Stearns & Co.), Sept. 15, 1906.  
 Adnephrin Oil Spray (Stearns & Co.), Sept. 15, 1906.  
 Adnephrin Solution (Stearns & Co.), Sept. 15, 1906.  
 Adnephrin Suppositories (Stearns & Co.).  
 Adrenalin (P. D. & Co.), Sept. 15, 1906.  
 Adrenalin Chloride Solution (P. D. & Co.), Sept. 15, 1906.  
 Adrenalin Suppositories (P. D. & Co.), Sept. 15, 1906.  
 Agurin (Cont. Color and Chem. Co.), Sept. 15, 1906.  
 Airol (Hoffman-LaRoche Chem. Works), Sept. 15, 1906.  
 Albargin (Koechl & Co.).  
 Alpha-Eucaine Hydrochloride (Schering & G.), Sept. 15, 1906.  
 Alphozone (Stearns & Co.), Sept. 15, 1906.  
 Alphozone Tablets (Stearns & Co.), Sept. 15, 1906.  
 Alumol (Koechl & Co.), Sept. 15, 1906.  
 Alypin (Cont. Color & Chem. Co.).  
 Aminoforn (Bischoff & Co.), Sept. 15, 1906.  
 Anesthesin (Koechl & Co.), Sept. 15, 1906.  
 Anthrasol (Knoll & Co.).  
 Antipyrine Salicylate, Sept. 15, 1906.  
 Antithermoline (G. W. Carrick Co.), Sept. 15, 1906.  
 Antiothyroidin (Merck & Co.), Sept. 15, 1906.  
 Antithyroid Preparations, Sept. 15, 1906.  
 Argentamin (Schering & G.), Sept. 15, 1906.  
 Argonin (Koechl & Co.), Sept. 15, 1906.  
 Argyrol (Barnes & Hille), Sept. 15, 1906.  
 Aristochin (Cont. Color & Chem. Co.), Sept. 22, 1906.  
 Aristol (Cont. Color & Chem. Co.), Sept. 22, 1906.  
 Aspirin (Cont. Color & Chem. Co.), Sept. 22, 1906.  
 Benzosol (Koechl & Co.), Sept. 22, 1906.  
 Beta-Eucaine Hydrochloride (Schering & G.), Sept. 22, 1906.  
 Beta-Naphthol Benzoate (Merck & Co.), Sept. 22, 1906.  
 Betol (Heyden Chem. Works), Sept. 22, 1906.  
 Bismal (Merck & Co.), Sept. 22, 1906.  
 Borochloretone (P. D. & Co.), Sept. 22, 1906.  
 Brometone (P. D. & Co.), Sept. 22, 1906.  
 Bromipin—10 per cent. (Merck & Co.), Sept. 29, 1906.  
 Bromipin—33 1-3 per cent. (Merck & Co.), Sept. 29, 1906.  
 Butyl-Chloralhydrate, Sept. 29, 1906.  
 Calcium Ichthyol (Merck & Co.), Sept. 29, 1906.  
 Calomelol (Heyden Chem. Works), Sept. 29, 1906.  
 Calomelol Ointment (Heyden Chem. Works), Sept. 29, 1906.  
 Cascara Evacuante (P. D. & Co.), Sept. 29, 1906.  
 Cascara Tonic Laxative Globules (P. D. & Co.), Sept. 29, 1906.  
 Chinaphenin (Cont. Color & Chem. Co.), Sept. 29, 1906.  
 Chloralamid (Schering & G.).  
 Chlorbutanol, Sept. 29, 1906.  
 Chloretone (P. D. & Co.), Sept. 29, 1906.  
 Chloretone Inhalant (P. D. & Co.), Sept. 29, 1906.  
 Citarin (Cont. Color & Chem. Co.), Sept. 29, 1906.  
 Collargol (Schering & G.).  
 Collargol Ointment (Schering & G.).  
 Cresotal (Cont. Color & Chem. Co.), Oct. 6, 1906.  
 Cresylone (P. D. & Co.).  
 Cupro-Hemol (Merck & Co.).  
 Dentalone (P. D. & Co.), Oct. 6, 1906.  
 Dermatol (Koechl & Co.), Oct. 6, 1906.  
 Diabetin (Schering & G.), Oct. 6, 1906.  
 Dionin (Merck & Co.), Oct. 6, 1906.  
 Diuretin (Merck & Co.), Oct. 6, 1906.  
 Duotal (Cont. Color & Chem. Co.), Oct. 6, 1906.  
 Duotonal (Schering & G.), Oct. 6, 1906.  
 Elixir Eupnein (Schieffelin & Co.), Oct. 6, 1906.  
 Elixir Saw Palmetto (P. D. & Co.), Oct. 6, 1906.  
 Empyroform (Schering & G.), Oct. 6, 1906.  
 Epicarin (Cont. Color & Chem. Co.), Oct. 6, 1906.  
 Erythrol Tetranitrate (Merck & Co.), Oct. 6, 1906.  
 Ethylenediamine (Schering & G.), Oct. 6, 1906.  
 Eucaine, Oct. 6, 1906.  
 Eucaloids (Edward G. Binz), Oct. 6, 1906.  
 Eucamol (Edward G. Binz), Oct. 13, 1906.  
 Euformol (P. D. & Co.).  
 Eugallol (Knoll & Co.), Oct. 13, 1906.  
 Eumydrin (Cont. Color & Chem. Co.), Oct. 13, 1906.  
 Euphorin (Fbrk. v. Heyden), Oct. 13, 1906.  
 Euphthalmin (Schering & G.), Oct. 13, 1906.  
 Equinine (Merck & Co.), Oct. 13, 1906.  
 Euresol (Knoll & Co.), Oct. 13, 1906.  
 Euresol Soap (Knoll & Co.), Oct. 13, 1906.  
 Euphoren (Cont. Color & Chem. Co.), Oct. 13, 1906.  
 Exodin (Schering & G.).  
 Ferrichthylol (Merck & Co.), Oct. 13, 1906.  
 Ferripyrine (Koechl & Co.), Oct. 13, 1906.  
 Ferropyrine (Knoll & Co.), Oct. 13, 1906.  
 Formalin (Schering & G.), Oct. 13, 1906.  
 Formin (Merck & Co.), Oct. 13, 1906.  
 Gallogen (Bischoff & Co.), Oct. 13, 1906.  
 Germicidal Soap (P. D. & Co.), Oct. 13, 1906.  
 Glutol-Schleich (Schering & G.), Oct. 13, 1906.  
 Glycerin Emollient (P. D. & Co.), Oct. 13, 1906.  
 Glycerophosphates, Oct. 13, 1906.  
 Guaiaacol-Salol (Merck & Co.), Oct. 13, 1906.  
 Guaiamar (Mallinckrodt Chem. Works), Oct. 20, 1906.  
 Guajasanol (Koechl & Co.), Oct. 20, 1906.  
 Haemoferrum (Stearns & Co.).  
 Hedonal (Cont. Color & Chem. Co.), Oct. 20, 1906.  
 Helmitol (Cont. Color & Chem. Co.), Oct. 20, 1906.

- Hemicranin (Cont. Color & Chem. Co.), Oct. 20, 1906.  
Hemogallol (Merck & Co.), Oct. 20, 1906.  
Hemol (Merck & Co.).  
Hemoquinine (Schieffelin & Co.), Oct. 29, 1906.  
Heroin (Cont. Color & Chem. Co.), Oct. 20, 1906.  
Heroin Hydrochloride (Cont. Color & Chem. Co.), Oct. 20, 1906.  
Heromal (Schieffelin & Co.), Oct. 20, 1906.  
Heroerpine (Schieffelin & Co.), Oct. 20, 1906.  
Hetol (Merck & Co.), Oct. 20, 1906.  
Hexamethylenamine Methylenecitrate, Oct. 27, 1906.  
Holocaine Hydrochloride (Koechl & Co.), Oct. 27, 1906.  
Hypnal (Koechl & Co.), Oct. 27, 1906.  
Ichthalbin (Knoll & Co.), Oct. 27, 1906, Nov. 10, 1905.  
Ichthammon (F. Reichelt), Oct. 27, 1906.  
Ichthargan (Ichthyol Co.), Oct. 27, 1906.  
Ichthermol (Merck & Co.), Oct. 27, 1906.  
Ichthoform (Merck & Co.), Oct. 27, 1906.  
Ichthyol (Merck & Co.), Oct. 27, 1906.  
Ichthyolum Austriacum (G. Heil & Co.), Oct. 27, 1906.  
Iodipia 10 per cent. (Merck & Co.), Oct. 27, 1906.  
Iodipin—25 per cent. (Merck & Co.), Nov. 3, 1906.  
Iodoformogen (Knoll & Co.), Nov. 3, 1906.  
Iodothyrene (Cont. Color & Chem. Co.), Nov. 3, 1906.  
Iothion (Cont. Color & Chem. Co.), Nov. 3, 1906.  
Isoform Powder (Koechl & Co.), Nov. 3, 1906.  
Isopral (Cont. Color & Chem. Co.), Nov. 3, 1906.  
Kasagra (Stearns & Co.), Nov. 3, 1906.  
Kole, Stearns (Stearns & Co.), Nov. 3, 1906.  
Kresamine (Schering & G.), Nov. 3, 1906.  
Lac Bismo. (E. J. Hart & Co.), Nov. 3, 1906.  
Lactophenin (Chem. Fbrk. vrm., Goldenberg, Geremont & Co.), Nov. 3, 1906.  
Laminoids Ferruginous (Nascent) (Schieffelin & Co.), Nov. 3, 1906.  
Lennigallol (Knoll & Co.), Nov. 3, 1906.  
Liquor Tritici (P. D. & Co.), Nov. 3, 1906.  
Lithium Ichthyol (Merck & Co.), Nov. 3, 1906.  
Lycetol (Cont. Color & Chem. Co.), Nov. 3, 1906.  
Lysidin (Koechl & Co.), Nov. 3, 1906.  
Mercuriol (P. D. & Co.), Nov. 3, 1906.  
Mesotan (Cont. Color & Chem. Co.), Nov. 3, 1906.  
Methaform (Stearns & Co.), Nov. 3, 1906.  
Migrainin (Koechl & Co.), Nov. 3, 1906.  
Neurocaine (Schieffelin & Co.), Nov. 3, 1906.  
Neuronidia (Schieffelin & Co.), Nov. 3, 1906.  
Novargan (Heyden Chem. Works).  
Novocaine (Koechl & Co.), Nov. 10, 1906.  
Nurose (Koechl & Co.), Nov. 3, 1906.  
Oil of Eucalyptus, globules (E. G. Binz).  
Organic Iron Preparations.  
Orthoform-New (Koechl & Co.), Nov. 10, 1906.  
Orthoform-New Hydrochloride (Koechl & Co.), Nov. 10, 1906.  
Ovoferrin (Barnes & Hille), Nov. 10, 1906.  
Oxaphor (Koechl & Co.), Nov. 10, 1906.  
Pegnin (Koechl & Co.), Nov. 17, 1906.  
Phenacrin (Cont. Color & Chem. Co.), Nov. 10, 1906.  
Phenocoll Hydrochloride (Schering & G.), Nov. 10, 1906.  
Phenocoll Salicylate, Nov. 10, 1906.  
Piperazine (Cont. Color & Chem. Co., Schering & G.), Nov. 17, 1906.  
Pollantin (Fritzsche Bros.), Nov. 17, 1906.  
Pollanin Powder (Fritzsche Bros.), Nov. 17, 1906.  
Protargol (Cont. Color & Chem. Co.).  
Purgatin (Knoll & Co.), Nov. 17, 1906.  
Pyramidon (Koechl & Co.), Nov. 17, 1906.  
Pyramidon Neutral Camphorate (Koechl & Co.), Nov. 17, 1906.  
Pyramidon Acid Camphorate (Koechl & Co.), Nov. 17, 1906.  
Pyramidon Salicylate (Koechl & Co.), Nov. 17, 1906.  
Quartanol (Schering & G.), Nov. 24, 1906.  
Red Bone Marrow (Armour & Co.).  
Sajodin (Cont. Color & Chem. Co.).  
Sal Ethyl (P. D. & Co.), Nov. 24, 1906.  
Saliformin (Merck & Co.), Nov. 24, 1906.  
Salit (Heyden Chem. Works), Nov. 24, 1906.  
Salophen (Cont. Color & Chem. Co.), Nov. 24, 1906.  
Saloquinine (Merck & Co.), Nov. 24, 1906.  
Saloquinine Salicylate (Merck & Co.), Nov. 24, 1906.  
Santyl (Knoll & Co.).  
Sextonal (Schering & G.), Nov. 24, 1906.  
Sidonal (Koechl & Co.), Nov. 24, 1906.  
Sodium Cacodylate, Nov. 24, 1906.  
Sodium Cinnamate, Nov. 24, 1906.  
Sodium Ichthyol (Merck & Co.), Dec. 1, 1906.  
Stovaine (Walter F. Skyes), Dec. 1, 1906.  
Stypticin (Merck & Co.), Dec. 1, 1906.  
Styptol (Knoll & Co.), Dec. 1, 1906.  
Styracol (Knoll & Co.), Dec. 1, 1906.  
Sublamine (Schering & G.), Dec. 8, 1906.  
Sulphonal (Cont. Color & Chem. Co.), Dec. 8, 1906.  
Suprarenal Alkaloid, Dec. 8, 1906.  
Suprarenal Liquid (P. D. & Co.).  
Suprarenalin (Armour & Co.).  
Suprarenalin Ointment (Armour & Co.).  
Suprarenalin Solution (Armour & Co.).  
Suprarenalin Triturates (Armour & Co.).  
Tannalbin (Knoll & Co.), Dec. 15, 1906.  
Tannigen (Cont. Color & Chem. Co.), Dec. 8, 1906.  
Tannoform (Merck & Co.), Dec. 15, 1906.  
Tannopin (Cont. Color & Chem. Co.), Dec. 15, 1906.  
Theobromine, Dec. 15, 1906.  
Theobromine Sodium Salicylate, Dec. 15, 1906.  
Theocin (Cont. Color & Chem. Co.), Dec. 22, 1906.  
Theophyllin, Dec. 22, 1906.  
Thermodin (Merck & Co.), Dec. 22, 1906.  
Thiocol (Hoffmann-LaRoche Chem. Works), Dec. 22, 1906.  
Thiosinamine (Schering & G.).  
Thyreoidectin (P. D. & Co.).  
Tonic Hypophosphites (Sharp & Dohme).  
Tonols (Schering & G.), Dec. 22, 1906.  
Triferrin (Knoll & Co.).  
Triferrol (Knoll & Co.).  
Trikresol (Schering & G.).  
Trional (Cont. Color & Chem. Co.).  
Trioxymethylene (Merck & Co.).  
Triphenin (Merck & Co.).  
Tritipalm (Stearns & Co.).  
Tropacocain Hydrochloride (Merck & Co.).  
Trypsogen (G. W. Carrick Co.).  
Tumenol-Ammonium (Koechl & Co.).  
Tumenol (Koechl & Co.).  
Tumenol Sulphone (Koechl & Co.).  
Tumenol Sulphonic Acid (Koechl & Co.).  
Tussol (Koechl & Co.).  
Urethan (Merck & Co.).  
Uriform (Schieffelin & Co.).  
Uritone (P. D. & Co.).  
Uropherin (Merck & Co.).  
Urotropine (Schering & G.).  
Urotropine-New (Schering & G.).  
Validol (Bischoff & Co.).  
Validol Camphoratium (Bischoff & Co.).  
Valyl (Koechl & Co.).  
Veronal (Merck & Co.).  
Vibutero (Stearns & Co.).  
Vinum Extracti Morrhuæ, Stearns (Stearns & Co.).  
Vioform (Bischoff & Co.).  
Vioform-Gauze (Bischoff & Co.).  
Xeroform (Heyden Chem. Works), Sept. 29, 1906, Oct. 13, 1906.

## REPORT OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

We reprint herewith from *The Journal* of the American Medical Association, for September 15, the first installment of the report of the Council on Pharmacy and Chemistry. Additional installments will appear from time to time. The importance of these reports is too evident to need comment. For the first time in the history of the organized profession, a scientific commission, whose ability and probity is above suspicion, has reported on preparations regarding which heretofore we have had only the report of those interested, financially and otherwise, in their exploitation.

### ACETOZONE.

A mixture of equal parts of benzoylacetyl peroxide and an inert absorbent powder.

**Actions and Use.**—Benzoylacetyl peroxide belongs to a class of compounds known as the organic peroxides in which an excess of oxygen has been combined in such a way that it is somewhat slowly given off in a nascent condition. On contact with water it hydrolyzes, forming benzo-peracid and aceto-peracid which exert marked oxidizing and germicidal action. In consequence of this change, these compounds are thought to be particularly adapted for internal administration. The germicidal and antiseptic properties of this substance have been attested by the experimental results of several observers. It has been used in ophthalmic, aural and nasal practice with asserted good effects as an antiseptic. It has also been applied internally, especially in typhoid fever, with a view to the disinfection of the intestinal canal, and appears to be an intestinal antiseptic. **Dosage.**—Acetozone is generally employed in aqueous solution prepared as follows: Add acetozone to warm water in the proportion of 1 Gm. to 1000 Cc. (15 grains to the quart), shake vigorously for five minutes, and allow to stand for about two hours. Decant the liquor as required. This solution may be drunk *ad libitum*, two quarts or more being taken by an adult in twenty-four hours. Acetozone is also used in oily solution as an inhalant. Manufactured by Parke, Davis & Co., Detroit, Mich.

### ACETOZONE INHALANT.

A solution of benzoylacetyl peroxide in liquid petrolatum. **Formula:** One hundred grammes contain: Benzoylacetyl peroxide, 1.0 Gm.; chloretone (chlorbutanol), 0.5 Gm.; Refined liquid petrolatum, 98.5 Gm.

**Dosage.**—It is to be inhaled in the form of a very fine spray, or nebula, best produced by an atomizer especially designed for oily liquids. Prepared by Parke, Davis & Co., Detroit, Mich.

### ACET-THEOCINSODIUM.

Acet-theocinsodium,  $C_7H_7N_4O_2Na + CH_3COONa$ , a double salt of sodium acetate and 1.3 dimethylxanthine-sodium (theophyllinsodium).

**Actions and Uses.**—It has the diuretic properties of theocin, reinforced by the diuretic action of sodium acetate, and being more soluble, it has been claimed to be more readily absorbed and better tolerated than theophylline. It is recommended in cardiac affections, nephritis, dropsy, etc. **Dosage.**—0.2 to 0.35 Gm. (3 to 5 grains), best given after meals. Manufactured by Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color and Chemical Co., New York).

### ADNEPHRIN EMOLLIENT.

Recommended as a local application where prolonged use is required.



Prepared by F. Stearns & Co., Detroit, Mich.

#### ADNEPHRIN OIL SPRAY.

The preparation is applied as a spray to the mucous membranes in congestive and inflammatory affections, preferably after washing with Dobell's solution. Prepared by F. Stearns & Co., Detroit, Mich.

#### ADNEPHRIN SOLUTION.

A sterile solution 1-1000 of the suprarenal active principle in physiologic salt solution containing one-half of one per cent. of methaform (chlorbutanol).

Actions and Uses.—The actions and uses of this preparation are described under Suprarenal Alkaloid. Dosage.—The dose internally is from 0.2 to 2.0 Cc. (3 to 30 minims) in water. Adnephrin is also used in oily solution as a spray, see Adnephrin Oil Spray, and in the form of ointment, see Adnephrin Emollient. Prepared by F. Stearns & Co., Detroit, Mich.

#### ADRENALIN.

The active alkaloid of suprarenal gland, prepared by the method of takamine, see Suprarenal Alkaloid.

Dosage.—Locally, 1-1000 to 1-15000 solution, as the chloride. Internally, 0.3 to 2 Cc. (5 to 30 mm.) of 1-1000 solution. Hypodermically, 1 to 15 drops of 1-1000 solution, diluted with sterile water. Manufactured by Parke, Davis & Co., Detroit, Mich.

#### ADRENALIN CHLORIDE SOLUTION.

Dosage.—See adrenalin. Prepared by Parke, Davis & Co., Detroit, Mich.

#### ADRENALIN SUPPOSITORIES.

1 part of adrenalin to 1000 parts of oil of thebroma (cacao butter). Each suppository weighs about 1 Gm. (15 grains). Prepared by Parke, Davis & Co., Detroit, Mich.

#### AGURIN.

Agurin,  $C_7H_7N_4O_2Na + NaC_2H_3O_2$ , a double salt sodium acetate and theobromine-sodium.

Actions and Uses.—It acts like theobromine, over which it has the advantage of great solubility and that it is well tolerated by the stomach. While inferior in diuretic power to theophyllin (which see), it is said to have greater power in sustaining the diuresis produced. Dosage.—0.5 to 1 Gm. (7 to 15 grains), preferably in wafers or capsules. If in solution, this should be freshly prepared (with peppermint water) and without sugar or mucilage. Manufactured by Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld. Germany (Continental Color & Chemical Co., New York).

#### AIROL.

Airol,  $C_6H_7(OH)_3(COOBiH(OH))=C_7H_6O_6IBi$ , a combination of bismuth oxyiodide (subiodile) and galic acid.

Actions and Uses.—As it liberates iodine in the nascent state in the presence of wound secretions it has been recommended as a desirable and efficient substitute for iodoform in the treatment of wounds, burns, skin diseases, gonorrhea, etc. Dosage.—It is used externally in the pure state or diluted with tale, or in the form of a 10 per cent. Suspension in equal parts of glycerin and water, or as a 10 to 20 per cent. ointment with 2 parts of petrolatum and 7 parts of wool fat. Manufactured by F. Hoffmann-LaRoche & Cie., Basle, Switzerland (The Hoffman-LaRoche Chemical Works, New York).

#### ALPHA-EUCAINE HYDROCHLORIDE.

Alpha-eucaine hydrochloride is the hydrochloride of benzoyl-methyloxypiperidine-carbonic methyl ester.

**Actions and Uses.**—The action of alpha-eucaine is similar to that of cocaine, but it is regarded as three and three-fourths times less toxic than cocaine. In large doses it first stimulates and then paralyzes the central nervous system: it slows the heart and produces a fall of blood pressure. Locally it acts like cocaine as an anesthetic, but dilates the blood vessels instead of contracting them. It does not dilate the pupil. It is more irritating to the mucous membrane than cocaine or than beta-eucaine. It has a moderate bactericidal action. It is used as a substitute for cocaine in general and minor surgery, but beta-eucaine is preferred for applications to the eye. Dosage.—2 to 5 or even 9 per cent. solutions. Not more than 2Cc. (30 minims) of a 4 per cent. solution should be used at one time. Manufactured by Chemische Fabrik auf Actien. vorm. E. Schering, Berlin (Schering & Glatz, New York).

#### ALPHOZONE.

Alphozone,  $(\text{COOH} \cdot \text{CH}_2\text{CH} \cdot \text{CO})_2\text{O}_2 = \text{C}_6\text{H}_{10}\text{O}_8$ , an organic peroxide resulting from the action of hydrogen dioxide on succinic anhydride.

**Actions and Uses.**—Alphozone belongs to the class of organic peroxides, and by its powerful oxidizing power becomes a germicide and antiseptic. Dosage.—Alphozone is also marketed in the form of tablets containing, each 0.065 Gm. (one grain), of alphonzone, which are used for making solutions, one tablet to 60 Cc. (2 fluid ounces) of water giving a solution (1 to 1000) suitable for general external use; but, as a nasal douche, one tablet in 180 Cc. (6 fluid ounces) of water is often preferred. Manufactured by F. Stearns & Co., Detroit, Mich.

#### ALUMNOL.

The aluminum salt of B-naphtholdisulphonic acid,  $(\text{Al}_2(\text{C}_{10}\text{H}_7\text{OH}(\text{SO}_2)_2)_3 = \text{Al}_2\text{C}_{30}\text{H}_{18}\text{O}_{21}\text{S}_6$ .

**Actions and Uses.**—It is an astringent and mild antiseptic. It is claimed that it can be used as a mild astringent, an irritant or a caustic, according to the strength of the solution, and it is asserted that it exerts a peculiarly destructive action on gonococci. It has been recommended for a variety of affections in which a caustic, astringent or antiseptic is indicated. It has been particularly recommended for gonorrhea in females, especially when affecting the endometrium. Dosage.—As a surgical antiseptic, in 0.5 to 3 per cent. solutions; in gynecology, in 2 to 5 per cent. Solutions; in otology and laryngology, either as powder or in  $\frac{1}{4}$  to 1 per cent. solution as douches, washes or gargles; as cautery, in 10 to 20 per cent. solution. Manufactured by Farbwerke vorm. Meister, Lucius & Bruening, Hoechst a.M. (Victor, Koechl & Co., New York).

#### AMINOFORM.

A name applied to Hexamethylenamina, U. S. P. Sold by C. Bischoff & Co., New York.

#### ANESTHESIN.

Anesthesin  $\text{C}_6\text{H}_4(\text{NH}_2) (\text{COOC}_2\text{H}_5) 1:4 = \text{C}_9\text{H}_{11}\text{O}_2\text{N}$  the ethyl ester of paramidobenzoic acid, obtained by the reduction of paranitrobenzoic acid.

**Actions and Uses.**—It was introduced as a substitute for cocaine and is a local anesthetic, similar in its action to orthoform and said to be equally effective, but free from irritant action and toxicity. The anesthetic action, like that of the related compound orthoform, resembles that of cocaine, but is purely local, does not penetrate the mucous membranes, and in consequence of its insolubility the compound can not be used by hypodermic injection. In consequence of its insolubility the anesthetic effect is more prolonged than that of cocaine. It is recommended in various forms of gastralgia, in ulcer and cancer of the stomach for the relief of pain, and is

applied locally in rhinologic and laryngeal affections, urethritic, etc.; it is also recommended for anesthetizing wounded surfaces, burns, ulcerations and painful affections of the skin. It is more effective in cases where the skin is broken. Dosage.—Internally, 0.3 to 0.5 Gm. (5 to 8 grains). in pastilles. Externally it is applied as a dusting powder, either pure or diluted. It may be applied as an ointment or in the form of suppositories. Manufactured by Farbwerke, vorm. Meister, Lucius & Breuening, Hoechst a. m. (Victor Koechl & Co., New York).

#### ANTIPYRINE SALICYLATE.

Antipyrine salicylate,  $C_{11}H_{12}N_2O.C_6H_4OH.COOH=C_{18}H_{18}N_2O_4$ , a weak chemical combination of antipyrine and salicylic acid.

Actions and Uses.—This compound possesses the properties of both antipyrine and salicylic acid and combines the analgesic power of the one with the anti-rheumatic action of the other. It has been used with good results in sciatica, rheumatic fevers, chronic rheumatism, influenza, pleurisy, dysmenorrhea, etc. Dosage.—0.3 to 2.0 Gm. (5 to 30 grains) in cachets or capsules.

#### ANTITHERMOLINE.

A name applied to a preparation said to be made according to the following formula: Each pound contains 4000 grains of imported washed kaolin, washed and purified, 14 grains boric acid, 14 grains oil of eucalyptus, menthol and thymol combined, and 4.9 fluid ounces of glycerin. It closely resembles the Cataplasma Kaolini, U. S. P. Prepared by G. W. Carnrick Co., New York.

#### ANTIHYROID PREPARATIONS.

Preparations obtained from the blood or milk of animals, after the removal of the thyroid glands. The use of these preparations is based on the theory that the thyroid gland secretes products which are toxic, but which neutralize, and are neutralized by, other toxic substances produced elsewhere in the body. Removal of the thyroid glands, therefore, leads to the accumulation of these second toxic substances as evidenced by the phenomena of cachexia strumipriva and myxedema. On the other hand, the blood or milk of such animals is capable of preventing the effects of a hypersecretion of thyroid substance, such as is supposed to occur in Basedow's disease (exophthalmic goiter.) These views are still largely hypothetical; but the majority of clinical observers report markedly beneficial results in the milder forms of the disease and in obscure nervous disorders which are supposedly connected with thyroid hypersecretion. The effects are less pronounced in the more severe forms. The action is merely palliative and other measures of treatment should not be neglected. Improvement occurs in two or three weeks and is indicated by an amelioration of the nervous symptoms, tremors, palpitation, insomnia and excitability. The administration must be long continued. Oral and hypodermic administration are equally effective, but the former is usually preferred. These preparations are not toxic, even when very large doses are used.

#### ANTIHYDROIDIN, Mœbius.

The blood-serum of sheep from which the thyroid gland has been removed at least six weeks before the blood is drawn, preserved by the addition of 0.5 per cent. of phenol.

Actions and Uses.—For action and uses see antithyroid preparations. Dosage.—It is administered by the mouth in doses beginning with 0.5 to 1Cc. (8 to 15 min.) three times a day, gradually increasing the dose as necessary. Manufactured by E. Merck, Darmstadt. (Merck & Co., New York).



## ARGENTAMIN.

An aqueous solution of silver nitrate and ethylenediamine, corresponding to 10 per cent. of silver nitrate.

Actions and Uses.—It is antiseptic and astringent like other silver salts, with the asserted advantage of being non-irritant and more penetrating than silver nitrate. It is said to be useful in all cases where the non-caustic action of silver nitrate is indicated. Dosage.—It may be used in the anterior urethra in 0.25 to 1 per cent. solution; in the posterior urethra in from 1 to 4 per cent. solution; in ophthalmology in 5 per cent. solution. Manufactured by Chemische Fabrik auf Actien, vorm. F. Schering, Berlin. (Schering & Glatz, New York).

## ARGONIN.

A soluble casein compound containing 4.28 per cent. of silver.

Actions and Uses.—Its action and uses are similar to those of silver nitrate, but it is claimed to have greater power of permeating living colloid membranes than other silver albumoses. It is applied as an injection in 0.1 to 0.2 per cent. solution; in ophthalmic practice a 10 to 20 per cent. solution in glycerin may be used. Dosage.—It is generally used in 0.5 per cent. solution, but even 20 per cent. solutions have been injected without producing irritant symptoms. Manufactured by Farbwerke vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

## ARGYROL.

A compound of a derived proteid and silver oxide, containing from 20 to 25 per cent. of silver.

Actions and Uses.—Solutions of argyrol (20 to 50 per cent.) are said to be non-irritating to mucous membranes. Taken internally it is said to be non-toxic. It is claimed to be an antiseptic. It is recommended in urethritis and cystitis, in conjunctivitis and in affections of the nose, throat and ear. Dosage.—It is employed in from 10 to 25 per cent. and even stronger solutions. Manufactured by Barnes & Hille, Philadelphia.

## ARISTOCHIN.

Aristochin.— $\text{CO}(\text{C}_{20}\text{H}_{23}\text{N}_2\text{O}_2)_2 = \text{C}_{41}\text{H}_{46}\text{N}_4\text{O}_5$ , the neutral carbonic ester of quinine.

Actions and Uses.—The same as those of quinine, but, since it is only slowly acted on by acids, it is said not to produce disturbance of the stomach and to be notably free from tendency to production of cinchonism. Dosage.—The same as that of quinine, in powder, mixed with milk sugar, dry on the tongue or suspended in liquids. Manufactured by Farbenfabriken, vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York).

## ARISTOL.

A name applied to Thymolis Iodidum U. S. P. Manufactured by Farbenfabrikin vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York).

## ASPIRIN.

Aspirin  $\text{C}_6\text{H}_5\text{O}(\text{CH}_3\text{CO}).\text{COOH}$ ,  $1:2 = \text{C}_9\text{H}_8\text{O}_4$ , the acetyl derivative of salicylic acid.

Actions and Uses.—It acts like salicylic acid, over which it possesses the advantage of producing less of the undesired local and systemic side effects, on account of the slow liberation of the salicylic acid. It passes the stomach unchanged, the decomposition beginning in the intestine. Dosage.—0.3 to 1 Gm. (5 to 15 grains) in capsules or wafers, or dissolved in sweetened water or dry on the tongue, followed by a swallow of water. The powder should be dis-

pensed in waxed paper. Manufactured by Fabenfabriken. vorm. Friedr. Bayer & Co., Elberfeld, Germany (Continental Color & Chemical Co., New York).

#### BENZOSOL.

Benzosol,  $C_6H_4(OCH_3)(C_6H_5COO)=C_{34}H_{32}O_3$ , a crystalline compound of guaiacol in which the hydrogen of the hydroxyl is replaced by benzoyl.

Actions and Uses.—Benzosol is decomposed slowly in the intestinal tract into guaiacol and benzoic acid which exert their proper actions. The liberated constituents are absorbed and excreted in the urine. It is not irritating. Its uses are analogous to those of creosote and of benzoic acid. It is recommended in incipient pulmonary tuberculosis, as an intestinal antiseptic in fermentation, diarrhea, typhoid fever, diabetes mellitus and as a urinary disinfectant in cystitis, etc. Dosage.—0.2 to 0.6 Gm. (3 to 10 grains), in powder, capsule, pill, or suspended in liquids or as an emulsion. Manufactured by Farbwerke. vorm. Meister, Lucius & Bruening, Hoechst a. M. (Victor Koechl & Co., New York).

#### BETA-EUCAINE HYDROCHLORIDE.

Beta-eucaine hydrochloride,  $C_5H_7N(CH_3)_3(C_6H_5COO).HCl$ , the hydrochloride of 2,6,6-trimethyl-4-benzoyl-hydroxypiperidine. Actions and Uses.—Beta-eucaine hydrochloride is a local anesthetic like cocaine, but weaker and devoid of the stimulating properties of the latter. It does not dilate the pupil, nor does it contract the blood vessels as does cocaine. It has the advantage of stability even on prolonged boiling. It may be used in all cases in which cocaine is indicated as a local anesthetic, especially in ophthalmology. Dosage. It may be applied in a 2 to 3 per cent. solution to the eye, 5 to 10 per cent. for nose and throat, and 5 to 10 per cent. for ointment for hemorrhoids. Manufactured by Chemische Fabrik auf Actien, vorm. E. Schering, Berlin (Schering and Glatz, New York).

#### BETA-NAPHTHOL BENZOATE.

Beta-naphthol benzoate,  $C_6H_5COO.C_{10}H_7=C_{17}H_{12}O_2$ , the benzoic ester of B-naphthol.

Actions and Uses.—Beta-naphthol benzoate is split up into its constituents on reaching the intestinal tract and acts as an antiseptic. It is said to be diuretic. It is used internally as an intestinal antiseptic in diarrhea and typhoid fever. Externally it has been recommended as a parasiticide in the form of 3 to 10 per cent. ointment, and has been used in psoriasis, eczema, scabies, etc. Dosage.—0.2 to 0.5 Gm. (3 to 8 grains); maximum dose, single, 1 Gm. (15 grains), daily 4 Gm. (60 grains). Manufactured by Fabrik von Heyden, Radebeul near Dresden (Merck & Co., New York).

#### BETOL.

Betol,  $C_6H_4.OH.COO(C_{10}H_7)=C_{17}H_{12}O_3$ , the salicylic ester of B-naphthol.

Actions and Uses.—Betol is not affected in the stomach, but is split up in its original components when it reaches the intestinal tract by the pancreatic juice and intestinal secretions. It is believed to act as an intestinal antiseptic and, being excreted in the urine, to act in a similar way in the bladder. It has the anti-rheumatic properties of salicylic acid. It is recommended for intestinal fermentations, catarrh of the bladder, particularly in gonorrheal cystitis, for rheumatism, etc. Dosage.—0.3 to 0.5 Gm. (4 to 8 grains) in cachets, milk or emulsion. Manufactured by the Heyden Chemical Works, New York.

#### BISMAL.

Bismal,  $4(C_{15}H_{32}O_{10}).3Bi(OH)_3=Bi_3C_{60}H_{96}O_{48}$ , a compound of bismuth hydroxide and methylelendigallic acid.

Actions and Uses.—Bismal is an astringent and is recommended for the

treatment of chronic diarrhea. Dosage.—0.12 to 0.3 Gm. (2 to 5 grains) in cachets or powder. Manufactured by E. Merck, Darmstadt (Merck & Co., New York).

#### BOROCHLORETONE.

A mixture of 1 part chloretone with 3 parts boric acid.

Actions and Uses.—Antiseptic and anesthetic, used externally as a surgical dressing powder. Prepared by Parke, Davis & Co., Detroit, Mich.

#### BROMETONE.

Brometone. 1,1,1-tribrom-2-methyl-propan-2-ol,  $\text{CBr}_3\text{C}(\text{OH})(\text{CH}_3)\text{CH}_3 = \text{C}_4\text{H}_7\text{OBr}_3$ , produced by the reaction of acetone on bromoform.

Actions and Uses.—Brometone is claimed to have the sedative action of the bromides without the disadvantage of producing bromism. In doses of 0.3 Gm. (5 grains) four or five times a day, in adults, it is claimed to cause no unpleasant results and to produce no disturbance of the digestive organs, and to have no appreciable effect on the secretions. Its action is prompt and its effect is manifest for several hours. In doses exceeding 1.6 Gm. (25 grains) daily it may produce dizziness, vertigo, anorexia, and mental hebetude, all of which symptoms disappear on discontinuance of its use. Therapeutically it has been recommended in mild conditions of excitation and insomnia, in so-called narcotic abstinence, in hysteria and in nervous affections generally. It relieves some forms of cough and is said to produce amelioration in about 60 per cent. of cases of epilepsy. It has been used to relieve dizziness due to labyrinthine disturbance. Dosage.—The dose is 0.3 Gm. (5 grains), to be repeated two or three times during twenty-four hours. Manufactured by Parke, Davis & Co., Detroit, Mich.

(To be continued.)

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#### SOMNOS.

The manufacturers of Somnos have been claiming that their preparation is a definite "chemical product formed by the synthesis of chlorenthanal with a polyatomic alcohol radical." Very few, if any, physicians who read this description realized that chlorenthanal is another name for chloral and that a polyatomic alcohol radical, in this instance, meant glycerin. In *The Journal of the American Medical Association* for September 1, 1906, attention is called to the actual facts in regard to this preparation in a comment on the circular letter published by the H. K. Mulford Company. In the literature regarding the physiologic action of Somnos the H. K. Mulford Company claimed that it has no "depressive action on the heart or circulation and has no destructive influence on the red corpuscles of the blood, nor does it cause gastric disturbances by continued use." The literature also repeatedly said that it contained no chloral and that it was free from the bad effects of chloral.

The Council on Pharmacy and Chemistry, in *The Journal A. M. A.* for September 15, publishes a report of investigations that were made on mice, guinea-pigs and dogs for the purpose of proving or disproving the claims made for Somnos by its manufacturers. The result of the investigation showed that the physiologic action of Somnos is practically indistinguishable from that of a 5 per cent. solution of chloral hydrate.

According to the reports, Somnos is no less toxic than chloral hydrate, and the depressing effects on the temperature, respiration and circulation are the same in each instance. The Council suggests that physicians who are in



the habit of using Somnos should compare the results they obtain from it with a 5 per cent. elixir of hydrate of chloral. In this way they can verify for themselves whether or not the Council's conclusions are correct, that a 5 per cent. elixir of chloral glycerate (Somnos) has the same physiological and therapeutical action as a 5 per cent. elixir of chloral hydrate.

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## BOOK REVIEWS

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**DISEASES OF THE DIGESTIVE SYSTEM.** Edited by Frank Billings, M. D. Professor of Medicine, University of Chicago. An authorized translation from "Die deutsche Klinik" under the general editorial supervision of J. L. Salinger, M. D. New York and London: D. Appleton & Co.

This volume includes articles from many of the most eminent of German clinicians, men such as Rosenheim, Riegel, Ewald, Boas, Oser and the like. It is a translation of the second part of "Die Deutsche Klinik," which, with Nothnagel's series, stands at the head of German clinical publications. The bulk of the volume is naturally devoted to diseases of the stomach and intestine, and most of the remainder to hepatic disorders. A chapter on "Symptomatology of Diseases of the Pancreas," by L. Oser, of Vienna, covers this subject adequately, and two chapters on perityphlitis, set forth the German views on this subject. The translation is well done, and the series can be unreservedly commended to our readers.

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**ESSENTIALS OF MEDICAL ELECTRICITY.** By Edward Reginald Morton, M. D., Trinity University Toronto, etc., etc. With 11 plates and 70 illustrations. \$1.50 net. London: Henry Kimpton. Chicago: W. T. Keener & Co. 1905.

The purpose of this little volume is to furnish to the student all the information necessary to enable him to approach the larger and more exhaustive works on medical electricity and electro-therapeutics. In a most concise and clear way the various forms of generators, batteries, rheostates, coils, etc., are described, while the remaining of the nine chapters are devoted to a consideration of the various types of electricity and currents and their different physiologic effect.

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**SYLLABUS OF LECTURES ON HUMAN EMBRYOLOGY:** an introduction to the study of Obstetrics and Gynæcology for Medical Students and Practitioners; with a Glossary of Embryological Terms. By Walter Porter Manton, M. D., Professor of Clinical Gynæcology and Professor Adjunct of Obstetrics in the Detroit College of Medicine; Third Edition. Revised and Enlarged. Illustrated with a colored frontispiece and numerous outline drawings. 12mo, 136 Pages; Bound in Extra Cloth. Price, \$1.25, net. F. A. Davis Company. Philadelphia.

While this work is specially designed for, and will be found particularly useful to students in their first and second years at college and is likewise a desirable manual for review and reference for the general practitioner, it is not intended to take the place of the exhaustive text-books on Embryology, but is primarily for use in the classroom supplementary to the lecture and for laboratory guidance.

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PLASTER OF PARIS AND HOW TO USE IT, by Martin W. Ware, M. D., Adjunct Attending Surgeon, Mount Sinai Hospital; Instructor in Surgery, N. Y. Post Graduate Medical School. 12mo; 72 Illustrations, about 100 pages. Surgery Pub. Co., 92 William St., N. Y. City, Cloth \$1.00.

This is a most useful book not only on account of the general demand for information and instruction upon the subject but because this knowledge was not previously available except in part, by reference to many books on allied subjects. The whole subject, from the making of the bandage to its use as a support in every form of splint, corset or dressing, is described and illustrated. The use of plaster of Paris in Dental Surgery is also covered.

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CONSERVATIVE GYNECOLOGY AND ELECTRO-THERAPEUTICS. By G. Betton Massey, M. D. Fifth Revised Edition. Illustrated with 12 Chromo-Lithographic Plates and 15 Half-Tones. F. A. Davis Co., Philadelphia. 1906.

A careful perusal of this volume must be recommended to every physician doing gynecologic work. It contains a large amount of valuable information. A non-operating gynecologist seems to be a better observer of details in the symptomatology which are of considerable importance from the point of view of diagnosis. The author's description of uterine discharges, his classification of salpingitis, his views on the correlation between the disorders of the nervous system and genital organs, and many other chapters in this volume, are exceedingly good.

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AN INTRODUCTION TO PHYSIOLOGY. By William Townsend Porter, M. D. Associate Professor of Physiology in the Harvard Medical School. Philadelphia: J. B. Lippincott Co. 1906.

This volume is a collection of fundamental and accessory experiments in several fields in connection with the new teaching of physiology introduced by the author for the use of medical students in Harvard University. The new method is fundamentally different from the old one. It consists of experiments and observations made by the student himself. The didactic instruction follows the student's experiments and considers them in relation to the work of other observers.

STUDIES IN THE PSYCHOLOGY OF SEX—EROTIC SYMBOLISM, THE MECHANISM OF DETUMESCENCE, THE PSYCHIC STATE OF PREGNANCY. By Havenlock Ellis. Pages 285. Extra Cloth, \$2.00, net. *Sold only by Subscription to Physicians, Lawyers, and Scientists.* F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

This is the fifth volume of the interesting series entitled: Studies in the Psychology of Sex. It discusses Erotic Symbolism, the Mechanism of Detumescence and the Psychic State of Pregnancy. A sixth concluding volume will finally consider the bearings of the psychology of sex on that part of morals which may be called "Social Hygiene."

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RECENT ADVANCES IN THE PHYSIOLOGY OF DIGESTION. By Ernest H. Starling, M. D., F.R. S. With twelve Illustrations. Chicago: W. T. Keener & Co., 1906. Price \$2.00 net.

This little volume contains the ten lectures given by Starling in the physiological department of University College, London, on the recent advances made in the knowledge of the physiology of digestion. In a very lucid manner the results are given of extensive original investigations made in said laboratory on certain aspects of digestion.

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#### NOTES.

W. B. Saunders Company, of Philadelphia and London, have just issued a revision of their handsome illustrated catalogue of medical, surgical, and scientific publications. This is a most elaborate and useful catalogue. The descriptions of the books are full, the specimen illustrations representative of the pictorial feature of the books from which they are taken, and the mechanical get-up entirely in keeping with the high order of the context. The authors listed are all men of recognized eminence in every branch and specialty of medical science. The catalogue is well worth having. A copy will be sent free upon request.

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Timeliness of interest, aside from any other condition, lends especial importance to the announcement of the early publication of *Foods and Their Adulterations*, by Harvey W. Wiley, M. D., to be immediately followed by a companion volume, *Beverages and Their Adulterations*. Dr. Wiley is Chief Chemist to the United States Department of Agriculture, at Washington, and his wide researches in the interests of purity in food commodities give anything he might write on the subject an authoritativeness that is unquestioned. The books will be generously illustrated from original photographs and drawings.



# County Societies in Affiliation with the State Medical Association

County.	President	Address of President.	Secretary	Address of Secy.
Adair	E. C. Collison	Kirkville	E. C. Grim	Kirkville
Andrew	D. B. Bryant	Savannah	C. O. Jeffries	Savannah
Atchison	W. G. Stafford	Tarkio	A. McMichael	Rockport
Audrain	C. A. Rothwell	Mexico	E. S. Cave	Mexico
Barry	Wm. M. West	Monett	D. L. Mitchell	Cassville
Barton	G. D. Allee	Lamar	J. L. McComb	Lamar
Bates	J. R. Coulson	Spruce	E. N. Chastain	Rich Hill
Benton	G. S. Greason	Lincoln	S. O. Davis	Warsaw
Boone	J. E. Thornton	Columbia	W. A. Norris	Columbia
Buchanan	O. G. Gleaves	St. Joseph	Chas. W. Fassett	St. Joseph
Butler	C. F. Green	Poplar Bluff	J. W. Mott	Poplar Bluff
Caldwell	R. K. Dodge	Polo	Tinsley Brown	Hamilton
Callaway	J. F. Harrison	Fulton	Martin Yates	Fulton
Camden	G. M. Moore	Linn Creek	G. T. Myers	Macks Creek
Cape Girardeau	H. L. Cunningham	Cape Girardeau	J. D. Porterfield, Jr.	Cape Girardeau
Carroll	W. C. Baird	Bogard	R. F. Cook	Carrollton
Carroll-Shannon	F. Hyde	Eminence	W. F. Chaffin	Van Buren
Cass	H. A. Brierly	Peculiar	J. A. Chilton	Raymore
Cedar	Kimball Hill	El Dorado Springs	J. W. Dawson	El Dorado Springs
Chariton	Oliver McEwen	Shannondale	R. G. Epperly	Salisbury
Christian	J. C. Young	Ozark	J. A. Roberson	Ozark
Clark	H. W. Harris	Winchester	A. H. Teel	Kahoka
Clay	L. J. Jones	Linden	F. H. Matthews	Liberty
Clinton	John Sturgis	Perrin	E. A. Colley	Plattsburg
Cole	G. E. Mueller	Jefferson City	A. W. McAlester	Jefferson City
Cooper	F. R. Smiley	Boonville	J. R. Lionberger	Boonville
Crawford	W. A. Metcalf	Steelville	A. H. Horn	Steelville
Daviess	W. L. Brosius	Gallatin	M. A. Smith	Gallatin
DeKalb	H. P. Yeater	Maysville	R. A. Evans	Amity
Dent	A. F. McMurtrey	Salem	J. C. Welch	Salcm.
Dunklin	N. F. Kelley	Kennett	G. L. Johnson	Kennett
Franklin	H. A. Booth	Pacific	A. C. Brown	Moselle
Gasconade-Marie				
Osage	J. J. Ferrell	Owensville	J. W. Nieweg	Lois
Gentry	G. W. Whiteley	Albany	J. N. Conrad	Albany
Greene	J. R. Boyd	Springfield	J. L. Ormsbee	Springfield
Grundy	N. E. Sutton	Trenton	D. W. Coon	Trenton
Harrison	A. H. Vandivert	Bethany	W. H. Wiley	Ridgeway
Henry	W. H. Benway	Deepwater	F. M. Douglass	Clinton
Holt	C. L. Evans	Oregon	J. F. Chandler	Forest City
Howard	N. E. Smith	Fayette	C. W. Watts	Fayette
Howell	A. H. Thompson	Lanton	A. H. Thornburgh	West Plains
Iron	R. W. Gay	Ironton	Ira A. Marshall	Ironton
Jackson	O. H. Dove	Kansas City	E. L. Stewart	Kansas City
Jasper	M. C. Shelton	Joplin	R. M. James	Joplin
Jefferson	J. W. Pickel	Crystal City	C. G. Harris	Festus
Johnson	L. J. Schofield	Warrensburg	E. H. Gilbert	Warrensburg
Knox	L. S. Brown	Edina	Henry J. Jurgen	Edina
Laclede	J. A. McComb	Lebanon	J. A. Pinckard	Lebanon
Lafayette	P. S. Fulkerson	Lexington	C. T. Ryland	Lexington
Lawrence-Stone	S. Stevenson	Aurora	C. A. Moore	Aurora
Lewis	J. C. Brown	Lewistown	Paul F. Cole	Steffenville
Lincoln	S. R. McKay	Troy	Wm. P. Smith	Troy
Linn	J. W. Mason	Brookfield	Foster Burke	Laclede
Livingston	L. E. Tracy	Chillicothe	W. M. Girdner	Chillicothe
McDonald	E. F. Doty	Anderson	M. L. Sellers	Anderson
Macon	W. H. Miller	Macon	C. W. Reagan	Macon
Madison	C. A. Anthony	Fredericktown	S. C. Slaughter	Fredericktown
Marion	Richard Schmidt	Hannibal	H. L. Banks	Hannibal
Mercer	H. P. Chesmore	Princeton	C. R. Buren	Princeton
Miller	W. A. Von Grempe	Iberia	W. L. Allee	Eldon
Mississippi	G. R. Wallace	Bertrand	R. K. Ogilvie	Charleston
Moniteau	J. M. Robertson	Latham	W. R. Patterson	Tipton
Monroe	S. M. Brown	Monroe City	M. C. McMurry	Paris
Morgan	W. L. Hatler	Barnett	J. T. Beale	Versailles
New Madrid	Welton O'Bannon	New Madrid	C. W. Wason	New Madrid
Newton	R. L. Wills	Neosho	Horace Bowers	Neosho
Nodaway	F. R. Anthony	Maryville	H. L. Saylor	Elmo
Pemiscot	J. G. Luten	Caruthersville	John Johnson	Hayti
Perry	T. M. Hudson	Perryville	F. M. Vessells	Perryville
Pettis	S. G. Kelly	Sedalia	Guy Titsworth	Sedalia
Phelps	W. H. Bruer	St. James	S. L. Baysinger	Rolla
Pike	J. W. Dreyfus	Louisiana	R. G. Hereford	Louisiana
Platte	Spence Redman	Platte City	G. C. Coffey	Platte City
Pulaski	W. L. Ragan	Richland	G. W. Orrick	Crocker
Putnam	C. H. Carryer	Hartford	T. A. Townsend	Unionville
Ralls	W. S. Harwood	Kennselaer	T. J. Downing	New London
Randolph	G. O. Cuppaide	Moberly	W. M. Dickerson	Renick
Ray	L. D. Greene	Richmond	E. F. Higdon	Richmond
Reynolds	J. M. Lowrey	Centerville	T. W. Chilton	Corridon
Ripley	S. A. Proctor	Doniphan	J. F. Redwine	Doniphan
Saline	C. C. Gore	Marshall	D. F. Bell	Marshall
St. Charles	J. R. Mudd	St. Charles	B. K. Stumberg	St. Charles
St. Clair	W. Cline	Appleton City	D. B. Williams	Oseola
St. Francois	J. L. Haw	Farmington	A. L. Evans	Bonne Terre
St. Genevieve	C. Moore	St. Marys	R. W. Lanning	St. Genevieve
St. Louis	J. C. Morfit	Humboldt Bldg	Davis Forster	5249 Raymond
St. Louis Co.	R. E. Guibor	Maplewood	R. D. Moore	Central
Schuyler	J. T. Jones	Queen City	H. E. Gerwig	Downing
Scotland	W. E. H. Bondurant	Memphis	A. E. Platter	Memphis
Scott	T. F. Frazier	Commerce	C. P. Haw	Benton
Shelby	L. W. Dallis	Hunnewell	A. M. Wood	Lentner
Stoddard	T. B. Wingo	Dexter	Ed. Moore	Bloomfield
Sullivan	J. C. Kessinger	Milan	J. S. Montgomery	Milan
Vernon	W. T. Bohannon	Nevada	T. McLemore	Nevada
Warren	W. J. Alexander	Marthasville	E. A. Fluesmeier	Wright City
Washington	J. A. Eaton	Belgrade	W. S. Smith	Belgrade
Wayne	J. P. Sebastain	Patterson	R. J. Owens	Mill Spring
Wayne	Arch Long	Denver	J. K. Phipps	Grant City

# MEETINGS OF THE COUNTY MEDICAL SOCIETIES

County.	Date of Meeting.
Adair.....	Monthly. First Thursday.
Andrew.....	Monthly. First Wednesday.
Atchison.....	Quarterly. January, April, July, October.
Audrain.....	Monthly. First Monday.
Barton.....	Quarterly. First Thursday, May, Aug., Nov., Feb.
Bates.....	Quarterly. Last Thursday in Feb., May, Aug. and Nov.
Barry.....	
Benton.....	Quarterly. First Tuesday, January, April, July, October.
Boone.....	Monthly. First Monday.
Buchanan.....	Semi-Monthly. Second and Fourth Wednesday.
Butler.....	Monthly. Last Friday
Caldwell.....	Quarterly. July, October, January, April.
Callaway.....	Monthly. Second Thursday.
Camden.....	Quarterly. Second Monday, April, July, Oct., and Jan.
Cape Girardeau.....	Monthly. Second Wednesday.
Carroll.....	Monthly. Second Tuesday.
Carter-Shannon.....	Quarterly. February, May, August and November.
Cass.....	Quarterly. First Thursday, March, June, Sept., Dec.
Cedar.....	Monthly.
Chariton.....	Monthly. Last Thursday.
Christian.....	
Clark.....	Bi-Monthly. First Mondays, Feb., April, June, Aug., Oct., Dec.
Clay.....	Monthly. Last Monday.
Clinton.....	Monthly. First Tuesday.
Cole.....	Quarterly. Second Thursday of Jan., April, July, Oct.
Cooper.....	Monthly. First Tuesday.
Crawford.....	Quarterly. First Tuesday, April, July, October, January.
Davies.....	Quarterly. January, April, July, October.
DeKalb.....	
Dent.....	
Dunklin.....	Monthly. Second Tuesday.
Franklin.....	Monthly. First Tuesday.
Gasconade-Maries-Osage.....	Semi-Annual. Fourth Thursday, April and October.
Gentry.....	Monthly.
Greene.....	Semi-Monthly. Second and Fourth Friday.
Grundy.....	Quarterly. July, October, January, April.
Harrison.....	Quarterly. Third Tuesday, January, April, July, October.
Henry.....	Quarterly.—Second Wednesday, Dec., March, June, Sept.
Holt.....	Quarterly.—First Thursday, January, April, July, October.
Howard.....	Monthly. First Friday.
Howell.....	Bi-Monthly. First Thursday of Dec., Feb., April, June, Aug., Oct.
Iron.....	Monthly. First Saturday.
Jackson.....	Semi-Monthly. Second and Fourth Thursdays.
Jasper.....	Semi-Monthly. First and Third Mondays.
Jefferson.....	Quarterly. Fourth Tuesday, Jan., Apr., July, Oct.
Johnson.....	Quarterly. June, September, December, March.
Knox.....	Monthly. First Monday.
Laclede.....	Quarterly. Second Monday, Jan., April, July, Oct.
Lafayette.....	Monthly. Second Tuesday, Jan., Mch., May, July, Sept., Nov.
Lawrence.....	Monthly.
Lawrence-Stone.....	
Lincoln.....	Quarterly. May, August, November, February.
Linn.....	Bi-Monthly. Jan., March, May, July, Sept., Nov.
Livingston.....	Monthly. Third Wednesday.
McDonald.....	Quarterly. Second Wednesday, Jan., April, July, Oct.
Macon.....	Monthly. Second Tuesday, 10 a. m.
Madison.....	Semi-Monthly. First and Third Tuesday.
Marion.....	Monthly. First Friday.
Mercer.....	Monthly. Second Thursday.
Miller.....	Quarterly. First Thursday of March, June, Sept. and Dec.
Mississippi.....	Monthly. First Monday.
Moniteau.....	Quarterly. March, June, September, December.
Monroe.....	Quarterly. First Tuesday of April, July, October, January.
Morgan.....	Quarterly. First Wednesday of March, June, Sept., Dec.
New Madrid.....	
Newton.....	Monthly. Second Tuesday.
Nodaway.....	Monthly. Second Tuesday.
Pemiscot.....	Quarterly. First Tuesday, January, April, July, November.
Perry.....	Monthly. First Wednesday.
Pettis.....	Semi-Monthly. First and Third Monday.
Phelps.....	Quarterly. March, June, September, December.
Pike.....	Monthly.
Platte.....	Monthly. First Wednesday.
Pulaski.....	Quarterly. November, February, May, August.
Putnam.....	Monthly. First Wednesday.
Ralls.....	Quarterly. January, April, July and October.
Randolph.....	Monthly. Second Tuesday.
Ray.....	Monthly. Third Wednesday.
Reynolds.....	Quarterly. January, March, June, October.
Ripley.....	
Saline.....	Monthly. Second Tuesday.
St. Charles.....	Monthly.
St. Clair.....	Quarterly. Second Tuesday, March, June, Sept., Dec.
St. Francois.....	
St. Genevieve.....	Monthly. Second Wednesday.
St. Louis.....	Weekly. Saturdays.
St. Louis County.....	Monthly. Second Wednesday.
Schuyler.....	Semi-Annually. July and December.
Scotland.....	Monthly. Second Tuesday.
Scott.....	Monthly.
Shelby.....	Quarterly. June, September, December, March.
Stoddard.....	Bi-Monthly. First Wednesday, Jan., Mch., July, Sept., Nov.
Sullivan.....	Monthly.
Vernon.....	Quarterly. First Tuesday, March, June, Sept. and Dec.
Warren.....	Monthly.
Washington.....	Monthly. First Saturday.
Wayne.....	Monthly.
Worth.....	Monthly. Second Wednesday.

## AMERICAN MEDICAL ASSOCIATION.

### Next Annual Meeting at Atlantic City, 1907.

President: WM. J. MAYO, Rochester, Minn.  
President Elect: JOSEPH D. BRYANT, New York City.  
Secretary and Editor: GEORGE H. SIMMONS, 103 Dearborn Ave., Chicago.

## MISSOURI STATE MEDICAL ASSOCIATION.

### Next Annual Meeting, Jefferson City, May, 1907.

President: C. H. WALLACE, St. Joseph.  
Vice-Presidents:  
F. W. ALLEN, Callao; W. G. COWAN, Sedalia; C. J. ORR, St. Louis; E. H. THRAILKILL, Kansas City; H. L. RIED, Charleston  
Secretary: C. M. NICHOLSON, St. Louis.  
Assistant Secretary: GAIL ALLEE, Lamar.  
Assistant Secretary: H. A. McDONALD, Pisgah.  
Treasurer: J. FRANKLIN WELCH, Salisbury.

#### Medical Section.

Chairman: J. H. P. BAKER, Salisbury.  
Secretary: GAIL ALLEE, Lamar.

#### Surgical Section.

Chairman: WARREN B. OUTTEN, St. Louis.  
Secretary: H. A. McDONALD, Pisgah.

#### ORATORS.

##### Oration in Medicine:

WM. F. KUHN, Farmington.

##### Oration in Surgery:

PAUL Y. TUPPER, St. Louis.

#### COMMITTEES:

##### Committee on Scientific Work.

C. M. Nicholson, Chairman; J. C. Morfit, F. E. Murphy.

##### Publication Committee.

C. M. Nicholson, Chairman; W. B. Dorsett; B. M. Hypes; W. G. Moore.

##### Committee on Public Health and Legislation.

F. J. Lutz, Chairman; Geo. Homan, H. E. Pearse.

##### Committee on Medical Education.

Woodson Moss, Chairman; W. B. Dorsett, Robt. T. Sloan.

##### Committee on Tuberculosis.

Wm. Porter, Chairman; J. M. Allen; W. S. Allee; B. H. Zwart.

## COUNCILLOR DISTRICTS AND COUNTIES IN EACH DISTRICT.\*

First District.—Councillor, E. E. Parrish, Memphis. Counties: Clark, Scotland, Schuyler.

Second District.—Councillor, H. Jurgens, Edina. Counties: Adair, Knox, Lewis.

Third District.—Councillor, J. D. Brummall, Salisbury. Counties: Chariton, Carroll, Livingston, Linn.

Fourth District.—Councillor, C. R. Buren, Princeton. Counties: Grundy, Sullivan, Mercer, Putnam.

Fifth District.—Councillor, E. H. Miller, Liberty. Counties: Platte, Clay, Ray, Clinton, Caldwell, Daviess.

Sixth District.—Councillor, W. E. McKinley, Denver. Counties: Harrison, Worth, Gentry, DeKalb.

Seventh District.—Councillor, W. T. Elam, St. Joseph. Counties: Buchanan, Holt, Atchison, Nodaway, Andrew.

Eighth District.—Councillor, L. W. Dallas, Hunnewell. Counties: Shelby, Marion, Ralls.

Ninth District.—Councillor, C. W. Reagan, Macon. Counties: Macon, Randolph, Monroe.

Tenth District.—Councillor, Woodson Moss, Columbia. Counties: Audrain, Boone, Howard, Callaway, Warren, *Montgomery*.

Eleventh District.—Councillor, W. B. Dorsett, St. Louis. Counties: Lincoln, St. Charles, St. Louis, Pike.

Twelfth District.—Councillor, F. J. Lutz, St. Louis. Counties: Franklin.

Thirteenth District.—Councillor, B. M. Hypes, St. Louis. Counties: Jefferson, St. Genevieve, Perry.

Fourteenth District.—Councillor, Wm. F. Kuhn, Farmington. Counties: Washington, Reynolds, Iron, St. Francis.

Fifteenth District.—Councillor, J. J. Norwine, Poplar Bluff. Counties: Mississippi, New Madrd, Wayne, Stoddard, Dunklin, Butler, Ripley, Carter, Pemiscot.

Sixteenth District.—Councillor, J. D. Porterfield, Jr., Cape Girardeau. Counties: Scott, Madison, Cape Girardeau, *Bollinger*.

Seventeenth District.—Councillor, W. S. Allee, Olean. Counties: Miller, Moniteau, Morgan, Camden.

Eighteenth District.—Councillor, G. Ettmueller, Jefferson City. Counties: Cole, Osage, Märies, Gasconade.

Nineteenth District.—Councillor, R. D. Haire, Clinton. Counties: Pettis, Henry, Benton, St. Clair, *Hickory*.

Twentieth District.—Councillor, C. T. Ryland, Lexington. Counties: Lafayette, Saline, Cooper.

Twenty-first District.—Councillor, M. P. Overholser, Harrisonville. Counties: Jackson, Cass, Johnson.

Twenty-second District.—Councillor, J. R. Buchanan, Nevada. Counties: Bates, Vernon, Barton.

Twenty-third District.—Councillor, A. R. Snyder, Joplin. Counties: McDonald, Newton, Jasper, Cedar, *Dade*.

Twenty-fourth District.—Councillor, R. L. Johnson, Rolla, Counties: Crawford, Phelps, Pulaski, Laclede, Dent, *Dallas*.

Twenty-fifth District.—Councillor, T. A. Coffelt, Springfield. Counties: Greene, Lawrence, Barry, Stone, Christian, *Webster, Polk, Taney*.

Twenty-sixth District.—Councillor, H. C. Shuttee, West Plains. Counties: Howell, Shannon, *Ozark, Oregon, Texas, Wright, Douglass*.

\*Counties in italic are unorganized.



# JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

Volume III

APRIL, 1907

Number 10

## ORIGINAL ARTICLES

### PROLAPSUS OF THE SIGMOID FLEXURE AND ITS RESULTS. CONSTIPATION, INDIGESTION, AUTOINFECTION, NEURASTHENIA AND DISPLACEMENT OF THE UTERUS AND APPENDAGES.\*

BY J. M. ALLEN, M. D., LIBERTY, MO.

The sigmoid flexure of the colon is an extension or rather the communicating link between the descending colon and the rectum. It begins in the left iliac fossa, slightly below the crest of the ilium, terminating a little beyond the left sacro iliac symphysis. In the first part of its course it is upwards then downwards, uniting with the rectum. It is held in its place by loose folds of peritoneum, the sigmoid meso colon. Its lumen is less than that of the colon, growing less as it approaches the rectum. Its structure is similar to that of the other large intestines, with the exception that the longitudinal fibers are not so abundant and strong. This is the anatomical description given by Gray, leaving the impression that it is never in the pelvic cavity, but Treves, Jonnesco and Bobier differ and state emphatically that it belongs to the pelvic cavity, Bobier differing slightly by stating that when the sigmoid is inflated it rises above the pelvic cavity. This might apply to gaseous inflation but could not be in fecal impaction. In an examination of many hundred cases both in my private practice and clinic at the University Medical College, Kansas City, Mo., I have always been able to outline it across the roof of the pelvis. If distended with fecal matter sufficient to come under the head of a prolapsed sigmoid I always find it pressing heavily down in Douglass's cul de sac in females to a greater or less degree dependent on the length of time of the existence of the prolapsus; in males pressing down from three to four inches. If Gray be correct technically in the normal position of this gut it is certainly subject to many variations of positions caused by functional disturbances or rather, the result of neglect on the part of the individual or the result of an elongated meso-colon. Its length is about 16 2-3 or 17 1-2 inches. Normally its relations to the rectum would allow its

\*Read at the Annual Meeting, Jefferson City, May, 1906.

contents to pass easily into this gut, but when prolapsed the lumen at the connecting point with the rectum is lessened with a slight upward turn of the connection. In many cases there is an invagination into the rectum several inches, which often produces complete obstruction in the passage of fecal matter, resulting in fecal impaction. My attention was first called to the possibility of prolapsus of the sigmoid in 1885 when a married lady, age 40, presented herself to me for examination and treatment. Family history most excellent. No tendency to dyscrasial conditions or neuropathic diathesis. She was married at 20 years gave birth to a child two years later. Two years later gave birth to another. Both delivered normally without injury to soft parts; no untoward sequelae; never was pregnant again; health perfect until about 30 years old. She had been slightly constipated from girlhood, monthly functions always normal. At about 30 years she became gradually constipated which increased until she had to take violent purgatives and enemas to move them. She was extremely nervous suffering from neurotic indigestion, the result of reflex irritation; greatly emaciated, complexion sallow, pulse 84 and slightly necrotic. Never had rheumatism, kidneys normal except as affected by indigestion. The burden of her conversation was constipation and the loss of power to assist the bowels to act and that the fecal matter was scybalous, very small balls and covered with mucus. She felt and believed that there was a permanent obstruction of some kind to the passage from her bowels. Practically she had consulted the medical profession of the United States. I made examination of the vagina, found the uterus greatly prolapsed and Douglass's cul de sac obliterated by being pressed downward at the same time feeling a large hard tumor between my finger and the sacrum, ovaries displaced downwards. Made a digital examination of the rectum and although she had not had an action from the bowels for the last seventy-five hours, I found the rectum free of fecal matter. Only three or four scybala not larger than a marble. Reaching for the roof of the pelvis my finger distinctly outlined the thin wall of the sigmoid greatly distended with fecal matter which was easily recognized by the spaces between the lumps. I carefully measured its diameter and am sure of its being three to three and one-half inches. To more fully assure myself of what to me was a new condition I placed the patient under the influence of chloroform and proceeded with a long large bivalve sigmoid speculum to dilate the rectum then with electric light looked for the union of the rectum to the sigmoid flexure. This I failed to find until I used vulsellum and pulled it down within the field when I could distinctly see the point of fecal matter at the union. I then inserted a uterine probe into the fecal matter to a distance of three or four inches. This demonstrated that it was a fecal impaction in the sigmoid flexure. While using the probe I found that the mass was

movable and not adherent. A point that I utilized afterwards was elevating the hips and getting the benefits of gravity when the weight of the fecal tumor would pull the gut out straight, and enable me to get the largest benefit from enemas. From this time forward I made it a fixed rule both in private and clinic practice of examining every case of constipation per rectum, that has come under my observation, a report of which I made in 1899 in an essay read before Clay County Medical Society and have continued the record until now, when I do not hesitate to say that seventy-five per cent of all so-called cases of constipation depend wholly on more or less prolapsus of the sigmoid flexure. The importance of a knowledge of this displacement to the general practitioner and surgeon cannot be overestimated when its results are recognized as will be shown by report of cases that neurotic functional disease of the stomach is produced by reflex irritation. Indeed, in my opinion, all cases of auto-infection occurring in the alimentary canal, excluding toxines, are dependent upon prolapsus of the sigmoid. In fact there is no other place in the intestinal tract where fecal matter is detained long enough for resorption. Again referring to first case I mention, the lady was suffering from interopsia and possibly gastropsia. When the patient was lying on her right side the descending colon was lying along the spinal column, as indicated by percussion. The space of its normal position was dull on percussion. The left kidney was displaced and its position could be felt inside a line drawn from the crest of the ilium to the second floating rib, which I suppose resulted from the constant weight attached to the meso-nephron. I have seen two other cases of displaced left kidney from same cause. (I suggest that the only possible cause to displace the left kidney is extreme prolapsus of the sigmoid, except those that are congenital). All of these cases after existing for a time are followed by characteristic discharge of scybala, usually covered with mucus. When the gut is entirely emptied it is always followed by a large discharge of mucus often mixed with pus which indicates ulceration. This inflammatory process may extend up the descending colon or down into the rectum producing chronic dysentery. Eccles of Manchester, England, in his classic work on the interopsia and gastropsia mentions a number of cases of cancer of the sigmoid which he attributes to continued irritation resulting from prolapsus. I have seen two cases of cancer of the sigmoid which I have reason to believe had their origin in a like manner. Displacement of the uterus and its appendages and inflammatory adhesions and possibly degenerative changes of the ovaries may be the result of a continued close contact of a fecal mass in a greatly attenuated bowel. Kelley in his classic work on gynaecology mentions this contact as highly dangerous, but gives no explanation; nor does he suggest the only possible explanation, the prolapsus of the sigmoid. Last year I was called to see a maiden



lady, aged 35, family history good who had enjoyed excellent health except from great constipation from childhood, until she was twenty or twenty-five years old, after which she suffered with great constipation, requiring violent purgatives and enemas to move her bowels. Neurotic indigestion, changing variety every few weeks: Neurasthenia, emaciated with loss of strength, auto-infection, etc. During this time she was under the charge of different physicians. Finally she passed into the hands of an accomplished gynaecologist who diagnosed prolapsus uteri with displaced ovaries and recommended retro-fixation uteri. The operation was done scientifically. The operator told the patient that the uterus was slightly subnormal. The ovaries not enough affected to demand treatment, and promised the patient a safe and speedy recovery, which he was justified in doing as he had no knowledge of the real cause of the prolapsus, hence could not suggest after treatment. When I visited the case I found the patient bed-ridden, emaciated, digestion and assimilation bad, skin sallow. On a digital examination per vagina I found the uterus within an inch of the vulva and parenchymatous metritis. On examination of the rectum I found an extreme prolapsus of the sigmoid with a slight invagination into the rectum. This to me was an intensely interesting case, highly instructive to both the general practitioner and gynaecologist. It is clear to my mind and doubtless to yours had the gynaecologist recognized the real cause of the prolapsus and applied appropriate treatment as will be given later, this lady would have made a perfect recovery and been of great value to society, but this was not done and she is practically an invalid for life. This and many other cases suggest to me the possibility of prolapsus of the sigmoid being the cause of many displacements and diseases of the uterus. If I am correct in this assumption it will go far to explain the failure of success of much of pelvic surgery. Indeed I can call to my mind as many as ten cases that a want of knowledge of the gynaecologist on this subject has resulted in lamentable failures. I am indebted to Eccles for the description of the two varieties of prolapsus sigmoid, the invaginated and the simple. I had not recognized the invaginated until I read his splendid work on interopsia gastropsia, published in 1900. The invaginated is where the sigmoid passes down into the rectum one to three inches. Where the invagination is an inch or less it rarely produces complete obstruction. However it may. When it does it is at once a surgical case and should be operated on without delay. To illustrate: Eighteen months ago I was called to see a case of this kind who had been suffering from obstruction for a week. Peritonitis had existed for three or four days. I easily diagnosed the case but the patient was too far gone for an operation and died in several hours. In this connection I desire to say that the invaginated variety never under my observation gets well nor is the invagination

ever reduced, but by continuous treatment they can be kept comfortable and live to old age. Its existence is a continued menace to life because of the possibility of its suddenly passing to complete obstruction. Here I desire to appeal to our progressive surgery to formulate an operation to meet this condition, which in my opinion could be done. In the simple variety the danger to life is never acute unless peritonitis is brought on by violent purgatives. Either of the varieties may result in inflammatory process leading up to adhesions, which render them practically, not permanently, curable. This adhesion can be diagnosed either digitally or by the use of a sigmoid speculum and the forcing of a metal catheter through the fecal matter into the sigmoid. I use a piece of steel shaped like a catheter but much longer for this purpose. The forces prominent in bringing about this condition are, first the accumulation of fecal matter in this gut by accretion. Second, an elongated mesentery. Again all fecal accumulations in the intestinal tract excluding those of seeds and medicines in the cecum have their origin in prolapsus of the sigmoid and nowhere else. All the fecal obstructions I have seen have their origin as stated above. Symptoms: The passage of scybala, empty rectum 48 hours after action of bowels, dullness of percussion in the lower hypogastric region. By digital examination we feel the distended sigmoid full of fecal matter which we easily recognize by the thinness of the gut, lying against Douglass's cul de sac in females often obliterating it, or across the pelvis in males. The duration of the displacement may be approximated by its position in the pelvis because it is progressive to a point the amount of auto-infection, reflex indigestion, emaciation and anemia of the nerve centers. It occurs most frequently between the ages of 25 and 50; oftener in females than males. Eccles reports a case at eleven years old which he thought had existed several years before. I have seen one five years old; several between ten and twenty. In my opinion there is no where in medicine that we can get more brilliant results than the prevention and treatment of this abnormal condition. Nor is there anywhere in medicine that sadder results follow neglect in diagnosis and treatment than in the condition under consideration. This is particularly true in regard to children. The principles we must recognize to guide us in treatment are as follows: First. A distended gut with loss of tonicity of muscular force of this section of the bowel. Second. The restoration of tonicity to the muscular structure of the bowel which takes a long time. Third. Intestinal tract must be kept disinfected by the use of intestinal germicides given in full doses of glycerine, the germs always being present. The diet should be carefully selected, avoiding carbo-hydrates and saccharine matter. The sigmoid must be unloaded if the bowel is largely distended. This can not be done by purgatives because the muscles around the gut have lost their contractility

and purgatives would spend their force on the muscles of the colon. I never give a purgative stronger than epsom salts or castor oil and not these until I have softened the mass by enemas. Here I enter my protest against the usefulness of the long colon tube for the following reasons: After the point of the tube passes the sphincter muscles the operator does not have further control of it and if it enters the sigmoid it would be by chance, which only occurs once in about fifty cases. Further, suppose I pass the tube directly to the opening of the sigmoid I would have no way of knowing this fact, besides the hardened fecal matter would prevent it from entering the bowel. It can be readily seen if we had an invaginated sigmoid it would be simply impossible to enter the bowel at all with a colon tube. Better to use a sigmoid speculum and an electric light and throw a stream of water directly against the fecal mass. This should be repeated twice a day, each time pushing the rectal tube as far into the sigmoid as possible. By this process in three to six days we can soften the mass so that a full dose of castor oil will entirely clear out the bowel. During this time you will remember that I directed to be given a germicide in full doses of glycerine every four hours. The amount of glycerine given would be far more than would be possibly absorbed and would pass down the intestinal tract reaching the mass which assists in softening, taking with it the fluid that is the result of exosmosis. I make it a rule to repeat hot normal salt solution enemas twice daily and one dose either of castor oil or epsom salts and giving this enema the solution must be thrown well into the sigmoid as hot as the patient can bear it for its stimulating effect upon the relaxed muscular structure. In a week or ten days I reduce the ipecacuhana to once daily and now begin to give internal medicine still farther to excite muscular contraction, at the same time continuing a germicide, using the following drugs: strychnia, or nux vomica, belladonna, ipecac, aloin, acetozone, creosote, ichthyol, guaiacol, and other intestinal germicides, also massage and vibration in various combination.

You observe in this combination that I increase the circulation of the blood in the brain in the shape of a nerve tonic. I vary the enema between solution of proper strength of bi-borate of soda, boracic acid, oil of gaultheria and if there be ulceration I add to the enema for every two quart mixture four ounces of fluid hamamelis and two drams of tincture of hydrastis canadensis. As a hæm-atic I always use either the glycerophosphates or the hypophosphate, never use the ferruginous preparations. As the disease improves I reduce the number of the enemas from day to day until I feel the tonicity of the muscles has returned. Beginning with the first case that I treated my successes have been brilliant. The time required for the treatment of these cases is from two to six or eight months. The cases in which the sigmoid is invaginated I have



reason to believe never fully recover, and require constant watching to prevent fecal impaction; however, much can be done for them by enemata and the prescription given above supplemented by the use of phosphate of soda given daily. I have explained the impossibility of relying upon the colon tube. The continuous use of the speculum and electric light becomes very tiresome and objectionable to the patient. If the prolapsed sigmoid is not adherent to the structures in the pelvis, a most efficient and successful enema can be given if the patient is required to bend over the railing of the bed allowing the weight of the hips to lie upon the pubes and under no circumstances touch the abdomen. The body should be upon an angle of 45 degrees; the physical results would be the weight of the fecal mass would fall out of the pelvis thereby draw the connection between it and the rectum straight. This would allow the enema to flow into the sigmoid without interruption. I have occasionally compromised with female patients at the suggestion of one of my patients to allow them to lie on an incline plane at an angle of 40 to 50 degrees; however, I don't think the result is quite as good as the previous position. In view of the fact that I stated that the invaginated form is incurable, if it amounted to as much as an inch of protrusion I should certainly recommend an operation. This essay has been drawn entirely from my note book of cases, trying to make it as near clinical as possible. In conclusion I desire to acknowledge my indebtedness to Dr. Eccles of Manchester, England for the valuable facts learned from the book he published on gastropsia and enteropsia.

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## CHOREA MINOR: A CONSIDERATION OF ITS PATHOGENESIS.\*

BY MAX GOLDMAN, M. D., KANSAS CITY, MO.

My apology for presenting a subject of such a nature as chorea is a desire to hear a discussion by the members of this society of those points pertaining to the condition that I shall touch upon in my paper.

It is my purpose to consider only what is termed chorea minor or Sydenham's chorea, which occurs in children of from four years up to and including the age of puberty: Choreiform affections such as of pregnancy as well as others occurring in adult life, will not be permitted to come within the province of this short discourse. Neither shall the writer discuss the symptoms or diagnosis or treatment of the affection.

Choreiform movements are usually described as contractions of groups of muscles, irregular, involuntary, indefinite, spasmodic, not correlated, unilateral or bilateral, and in themselves characteristic.

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\*Read before the Jackson County Medical Society March 19, 1907.

Any part of the muscular frame, even the muscles of the eye, may be involved in the movements.

It might be of interest in connection with the consideration of choreic movements to mention one or two facts with reference to the physiology of voluntary movements. No attempt will be made to describe here the anatomy of the motor areas of the cortex, motor tracts or other anatomical structures concerned in the creation and actual production of co-ordinated muscular movements. It must be brought to mind, however, that not all physiologists have at present arrived at a definite conclusion in regard to the question of just what anatomical factors are concerned and in what way they are concerned in the mechanism of stimulating or inhibiting voluntary movements; this much is known; that in the cortex cerebri are the centres which are necessary for the reception and interpretation of the various stimuli arriving constantly, during the conscious as well as the unconscious state; which centres are concerned, we have every reason to believe, in that higher function volition, which regulates not only voluntary movements but also mental activities, as well as many of the various so-called automatic acts of the body; but how and by what means a voluntary action originates has not been definitely determined. A distinctive lesion of the motor tract, e. g., the pyramidal tract, will result in a loss of some motor function, i. e., paralysis, although one investigator claims to have produced choreic form movements by destruction of a portion of the internal capsule (Ray.) This I doubt, since I am convinced that had there been a loss of fibres in the tracts, some paralysis would necessarily have resulted.

Now when one remembers that choreiform movements are more or less perversions of normal muscular contraction, one may be at a loss to know whether those movements are due to the loss of some inhibitory influence exerted upon the centres controlling voluntary action, or whether, conversely, they are due to excessive stimulation of the motor centres concerned. The writer is desirous of hearing some discussion on this point.

So much for the general nature of the *movements* of the condition, chorea minor.

Since there exists a great diversity of opinion as to the pathology of chorea it might be well to survey very briefly some of the most important facts bearing upon the etiology: as it will be seen that the etiology of the condition and the lesion, whatever it may be, are very closely associated. Many of the factors in its causation ordinarily spoken of will be omitted intentionally.

It is a matter of some importance, observed clinically, that children that are by nature of what is spoken of as a "nervous" temperament are more susceptible and predisposed to the affection. Moreover, the disease is often preceded by evidence of disturbances in the

general nervous condition of the child, such as would be caused by broken sleep, night terrors, unusual mental strain, etc., etc.

Closely associated with the preceding and very probably a cause thereof, are seen depraved metabolic activities induced in a variety of ways. This is undoubtedly a factor in the development of many cases of chorea; anemia, therefore, especially of the chlorotic type is observed very frequently. According to DaCosta, however, there is no perceptible diminution in the number of erythrocytes and no leucocytosis: at any rate there is not a constant blood change, unless it be due to complications: certain it is that no blood alteration characteristic of the disease has been observed.

It will be seen after carefully studying the factors mentioned by many authorities, as aiding in the causation of chorea that lesions of the heart valves brought about by endocarditis are frequently spoken of as accompaniments of the affection if not effects of the toxic agent causing the chorea. Be that as it may valvular lesions, and pericardial adhesions, are frequently detected, clinically as well as post mortem. It is the opinion of the writer that circulatory disturbances in the blood vessels of the cortex primarily, engorgements that may result from failure of circulatory compensation because of such valvular defects in the heart, or of cardiac impediment on account of pericardial adhesions or inflammations, are factors in the causation; these factors may be predisposing or exciting.

Reflex irritation of the cortical motor area is a cause of chorea: of these the intestinal irritation has been most commonly observed. Overstudy as a predisposing factor has been thought by many to aid in the causation. Fright and other disturbances of emotion, are given by good authorities as agents in the production of this affection. Allan McL. Hamilton speaks of scarlet fever, measles, whooping cough, and diphtheria, having been followed by intractable choreic attacks. In a case of my own, trauma to the head in frontal region of one side appeared distinctly as an exciting cause. This child was an eight year old boy, who was kicked in the right side of the head in a scuffle with a playmate; he lost consciousness for a few minutes and during the rest of the day as well as for two or three days following, seemed to be suffering slightly from the effects of the cerebral concussion. On the fifth day he developed a severe choreic attack which involved nearly all the muscles of the body. He improved shortly after, but was lost from continued observation before he recovered. There was no paralysis in this case, nor any unusual interference in speech. The boy seemed well nourished, but of a high strung nervous temperament; he had never before suffered from chorea.

A very frequent clinical observation is the association with chorea of acute articular polyarthritis as well as subacute articular rheumatism. Rheumatic manifestations may precede, follow, or, strange as it may seem, alternate with chorea. In regard to this



phase of the subject I wish merely to mention an interesting observation, viz., that chorea rarely, if ever, develops during an attack of acute polyarthrititis and never during the stage when the temperature is high, but rather in the subsidence of the acute stage of the disease or in the interval. In reference to this point, C. B. Radcliffe in his excellent article on chorea in Reynold's System of Medicine says: "Certainly there is little reason for connecting chorea with fever." And further, it may be "supposed that the chorea is connected with irritation, not with inflammation,—that is to say, with the state which precedes inflammation always, and which may or may not issue in inflammation. In this way then, the cases which have been given, in which the traces of inflammation are absent after death must be looked upon as cases in which the chorea proved fatal before irritation resulted in inflammation, and the cases in which the signs of inflammation *were* present as cases in which before death irritation had resulted in inflammation."

Rheumatism, or perhaps, I had better say the systemic condition predisposing to rheumatism, is a potent factor in the etiology and development of this affection; this is, perhaps, now the most universally recognized clinical fact in connection with chorea: cardiac defects occupy a clinical relationship to chorea very similar to rheumatism.

A matter which has interested me greatly is the general failure to demonstrate any characteristic lesion of chorea. The lesions which have been held responsible are as varied as the number of pathologists who have worked scientifically along this line: and yet, to quote from Allan McLane Hamilton, "these findings merely show that in *fatal cases* of chorea there are found occasionally textural alterations in the brain and cord, which are inconstant in character." Is it probable that a temporary metabolic disturbance not recognizable post mortem is occasionally responsible for this affection? It would seem so.

The fact that so many cases recover completely would suggest certainly that the cause, whatever it might have been, was permanently removed. Yet it has been the general observation of clinicians that recurrences are comparatively frequent previous to ultimate, complete recovery. In many cases of death of patients with chorea, other serious maladies or pathologic conditions have been found; many of the latter were thought to have been the result of rheumatism, an acute infectious disease. What conclusive evidence have we that the chorea was due only to the brain lesion discovered in these cases? There are some who insist that chorea is the result of the invasion of the cerebrum by the micro-organism of rheumatism but what can be said of those fatal cases of chorea wherein no pathologic lesion could be demonstrated?

I am of the opinion that, given a child of nervous temperament

who has a depraved nutritive tissue activity so that he becomes predisposed to the development of nervous derangements or any of the acute infectious diseases; given also in such an individual a condition of cortical cerebral irritation from capillary engorgement and even blood extravasation, and chorea is likely to result. Inasmuch as this affection of children is rather of a transient nature as to duration, and one that as a rule yields more or less readily to treatment, even if it be merely rest; and inasmuch as it is frequently observed at the periods when children are so easily affected by circulatory disturbances, like the convulsions in the congestions of digestive derangements, during neurasthenic states seen about the age of puberty, is it not possible that it is due to such vaso-motor disturbances in the cortex as above referred to? The blood extravasations, if present need not necessarily be attended by inflammation unless it be the simple non-infective type of inflammation resulting in absorption of the perivascular exudate and a return to normal. It is not the intention to oppose the theory of the infectious nature of this disorder. At the same time we are compelled to admit that so far as we know, at present, it cannot be said that all cases are infectious in the ordinary sense of the term. However, it is probable that most cases are toxic in origin. The theory that chorea is rheumatism of the brain as claimed by Poynton and Payne, and Lees of England does not appeal to me; for such competent clinicians as Eichhorst of Zurich, Switzerland, and others observed cases the result of fright in children in whom a rheumatic element could absolutely be ruled out; whilst, as capable a man as Allan McLane Hamilton saw cases in whom reflex intestinal trouble resulted in the disease which disappeared upon the removal of the cause.

While I firmly believe rheumatism to be a factor in the causation, chiefly by means of its concomitant metabolic disturbances, but also by its complications with their evil results, as well as the micrococci directly invading the cortical motor areas primarily, yet I am of the opinion that by no means all of the cases should be classed as rheumatic. Like Spiller of Philadelphia, I feel that this relationship has been too greatly exaggerated.

In conclusion, we are at the present time forced to admit that the direct cause of chorea in children is not positively known. However, from a study of the nature of this symptom complex and its accompanying disorders, it appears to me that we can safely say that it is induced by some injury, or at least irritation, of a temporary character, to the cells in the motor areas of the cortex cerebri, and possibly some cells in the spinal cord having to do with the control of muscular movements; the above condition is brought about either as a result of the absorption and injurious effect of toxic substances derived from faulty metabolic activities or derangement of nutrition, which may follow some acute infectious diseases, or may be the effect

in other cases of vascular congestion in the cortex from nerve shock, through vaso-motor disturbance or reflex stimulation of cells of the motor area. Granting this, the treatment of the affection would then resolve itself into prophylaxis where this is possible: and, in cases where the attack has already developed, the judicious employment of mental and physical rest and quiet, in addition to well selected re-constructives to establish normal glandular activity; thus improving blood circulation and removing altered arterial pressure; at all times it is well to study minutely the most probable cause in each individual case. Lastly, chorea is not a neurosis pure and simple, although so far as present indications show no destruction of nerve tissue at ends the disease.

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## THE IMPORTANCE OF POST-OPERATIVE TREATMENT IN DISEASES OF THE RECTUM.\*

BY W. H. STAUFFER, M. D., ST. LOUIS.

Every few years the profession is treated to some new operation in surgery, the presentation of some much wanted instrument, or the modification of some operation or instrument. This custom has become so prevalent of late that the profession looks with suspicion on all such until an honest demonstration is made. It is not my purpose to criticise the operator or the operation, but to insist, in as forcible a manner as possible, that he complete his work, generally well begun, first, for the future welfare of his patient, and next for the sake of his own reputation.

In scanning the pages of many of our excellent text books and journals, one is impressed with the large space taken up in discussing the symptoms, etiology, pathology, and many artistic, rather than useful, illustrations intended to assist the operator in his technique, while the future treatment is dismissed with a few sentences, if indeed it be mentioned at all. Following any surgical procedure, there are many remote diseases occurring with sufficient frequency to keep a thoughtful surgeon on the lookout for unforeseen complications for days and weeks, or until the patient's convalescence is at an end. Good assistants and well trained nurses are not always unmixed blessings, however useful and ornamental they may be in the sick-room. Our responsibility, for lack of proper attention, should not be shifted to subordinates. If a man is too busy to give his work the attention it deserves, there are others who may not be so skillful but are often more conscientious, who are perfectly willing, yes, waiting, for patients with patience.

The advent of the well-nigh universal use of local anesthetics for surgical operations is largely responsible for incomplete and bung-

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\*Read at the Annual Meeting, Jefferson City, May, 1906.



ling work. Because rectal surgery is classed in the field of minor surgery, does not make it less important. The percentage of imperfect results or deaths is higher in minor surgery than in pelvic gall-bladder, or stomach surgery. The mortality resulting from whooping cough and measles was higher last year than the combined mortality of diphtheria and scarlet fever. Who of us does not do better work when our patients are very sick, or a surgical operation requiring our best effort confronts us. The pain and discomfort resulting from an ulcer or fissure of the rectum is often out of all proportion to the size of the lesion, and not infrequently unfits the unfortunate victim for mental and physical usefulness.

There is no doubt that many surgeons are doing minor surgery in their offices. Nothing can be said if the office is as well equipped for the purpose as a modern operating room in a hospital except that the patient will always be subject to the dangers of a transportation to his home. If these dangers are of minor importance, there can be but little objection. Still, for all but certain specialties the practice is not to be recommended. I think that such operations as curettement, or the ablation of internal hemorrhoids, or the dilatation of urethral strictures should be done under anesthesia and in a hospital, and neither at the home of a patient nor at the surgeon's office. The dangers and accidents which may follow an anesthesia, either local or general should not be incurred except in a hospital.

Another reason for condemning office operations is the fact that the failure or success of office operations will depend upon the preparation previous to the operation which is always necessary, and this can be given much more conveniently in a hospital than elsewhere.

Another weighty argument against office operation is that we never know exactly what patients will suffer from shock after minor operations, but we do know that the treatment of this condition can become very protracted and may require the most painstaking attention, severely taxing the trained attendants of a well equipped hospital in some cases. Therefore, I cannot advise the office treatment of minor surgical cases. In other words, I do not favor the performance of operations requiring anesthetics in the office. The future treatment and the change of dressings, in which anesthesia is not required, may be done in a well furnished office, although even for this purpose the dressing room of a hospital is the safest and most preferable place.

The post-operative treatment depends, first, on the nature of the pathological condition, and, second, the operation selected for the relief or cure of the same. In a general way it may be said that in the choice of operative interference to be selected, that operation is the best which sacrifices the least tissue, is least painful and does not impair function. Any undue violations, or injury to tissue involved in

any operation invites infection, which is only another term for inflammation.

The so-called ambulant treatment of diseases of the rectum is wrong in principle, as it violates the first law of nature in the restoration of any diseased or injured organ, namely, complete rest of the part, so that nature may do her duty in the shortest possible time.

Any one who knows his anatomy can perform a colotomy, but it requires patience and some mechanical ingenuity to secure a serviceable artificial anus, and the comfort of the patient depends more on the latter than on the former. How often do we hear patients say that they would much prefer death to the condition of some one they know who had consented to a colotomy; still, as you know, there are few, if any, operative procedures which promise so much relief, if properly executed.

The cause of ulceration is undoubtedly microbic. Both Dr. Klein and Prof. Sims Woodhead have made a most thorough investigation of the discharge from the ulcerated surface and also of portions of diseased tissues, with a view to the determination of the cause of this disease. These investigations have not led to the discovery of any specific bacillus other than the bacillus coli communis, so that it is possible that this organism may under certain altered conditions of soil be capable of producing the disease in question. The exact nature of the exciting cause is still in doubt, but that the predisposing cause is an unhealed wound the histories of my cases clearly indicate. These records with few exceptions show that ulceration only supervened in the operation wounds of patients who had been allowed either to leave the hospital or to go about before complete cicatrization had occurred, and I have never personally met with an exception to this rule. I would strongly urge, therefore, that patients who have undergone rectal operations should not be discharged until their wounds have completely healed. It is true that partially healed wounds in the majority of rectal cases proceed to complete cicatrization after the patient has been discharged, but the risk of infective ulceration supervening is sufficient to justify keeping such patient in bed until the wounds are soundly healed. A week or two longer in the hospital is to my mind much preferable to the risk of contracting a disease which may take years to cure and invariably gives rise to sequelae that decidedly tend to make the patient's life miserable, at least for a time, and in some cases to shorten it.

Any operation on the rectum resulting in cicatricial tissue, predisposes to ulceration, as the nutrition of the parts is thereby involved.

The so-called hypodermatic method of treatment of hemorrhoids is another prolific cause of ulceration. It is a recognized fact that cicatricial tissue in the cervix uteri predisposes the parts to ulceration, making the location a good one for carcinoma. W. J. Mayo, in a recent article on cancer of the stomach, has this to say: "Especially

must we be suspicious if in the history there are symptoms of old or recent ulceration. In our 39 cases, 56% showed direct evidence of carcinoma developed on ulcer." Graham showed a clinical history of ulcer in over 50% of the cases of gastric carcinoma which have come under his observation, although years may have elapsed between the two diseased processes.

J. B. Murphy gives it as his opinion that the majority of cases of cancer of the stomach will show precancerous symptoms of ulceration. If these conditions existing in the stomach and cervix uteri predispose to malignancy, why would not similar conditions, so frequently found in the rectum, be responsible for like results. When we consider the fact that over 80% of malignant growths occurring in the intestines are located about the rectum and anus, and our inability to treat cancer satisfactorily in most cases, a new significance is placed on the importance of treating conditions predisposing to this sad ending.

This question cannot be settled by post-mortem evidence. For instance, suppose we were told that the post-mortem examination of one thousand women who had died of cancer of the cervix uteri did not show a single one who had cervical laceration, would not the query at once arise, how entirely impossible it would be for the most skillful pathologist to determine from the specimens in question whether there had ever been laceration.

Is this not equally true of cancer of the rectum? Before the patient dies, all traces of the ulcer would be lost in the gross extent of the disease.

Prevention of disease and pain should ever be our aim, and if operative interference is indicated, let us do our work wisely and well.

Humboldt Building.



## LESSONS TO BE DRAWN FROM FORTY-THREE RECENT OPERATIONS ON THE STOMACH.

BY WILLARD BARTLETT, M. D., ST. LOUIS, MO.

The result of modern operative work on the stomach serves, possibly, as the best example of the striking progress made by surgical therapeutics in the past few years. However statistics founded on gastric operations performed more than three years ago, when the technique was but partially developed, are of comparatively so little value, that I lay especial emphasis on the fact of these remarks being confined to the results attained in forty-three consecutive operations performed in the recent past.

Fifteen of these were for cancer of the stomach and twenty-three for gastric ulcer. Gastro-enterostomy was done twenty-seven times and seven resections of the organ were made. In three cases there was cancer so extensive that I had to content myself with a simple exploration, while in two others, having perforated gastric ulcers to deal with, I resorted to drainage alone, the condition of these patients being too critical to warrant anything further. There were two atonic dilatations for the correction of which gastropexy was undertaken. In one patient, suffering from perigastritis, the organ was so deformed and the pylorus so bound down with old adhesions that I did a gastro-enterostomy for drainage; in one instance drainage of the gall bladder into the stomach was instituted, for the relief of jaundice, due to complete obstruction of the common duct by cancer of the head of the pancreas. The forty-third operation was done for gastric hemorrhage due to a gunshot wound of the abdomen. Here the work consisted in ligating bleeding vessels at the minor curvature.

Only four of these patients in whom a stomach operation was undertaken for the relief of gastric conditions, died in the hospital from any causes whatsoever. One of them, seventeen days after gastro-enterostomy, died from vicious-circle while another succumbed to acute bronchitis six days after a resection, free from abdominal symptoms and taking plenty of fluids. A third was also free from abdominal symptoms and taking nourishment three days after a gastrectomy, when he expired suddenly as a result of pulmonary embolism. Too long an operation resulted in the death of the fourth patient; the procedure took an hour and a half, during which time I removed the patient's gall bladder after having made a suture gastro-enterostomy for cancer. In view of this single experience we now give the most serious consideration to the prevention of post-operative shock by using the minimum quantity of ether as well as by finishing the various types of operation within the following period, viz.: button gastro-enterostomy fifteen to twenty minutes, suture

gastro-enterostomy thirty to forty minutes, gastrectomy forty-five to sixty minutes.

It will be seen from the above that we lost only one patient in direct consequence of the forty-three operations, and in order to show that this work, viewed from any standpoint, is becoming safer with increasing experience, I will state that we have not lost a single gastro-enterostomy or resection patient since November, 1905, nearly a year and a half ago.

Many cases are alike in all particulars, hence there is no object for my including all the details of every case. I believe that more can be accomplished by giving particular prominence to rare or especially interesting manifestations of a few, which may prove to be unusual. This, as above stated, is a virgin field, and every uncommon observation is of value, as a large number of them, taken from various operators, must finally go together to make up the sum-total of our knowledge on the subject.

The danger of post-operative hemorrhage is strikingly illustrated in the following case:

Mrs. C., a resident of St. Louis, 41 years of age, born in Alabama, housewife, married; had been a sufferer from indigestion for twenty years. I will not go further into the history than to state that it was impossible for the most careful physical and chemical examination to make an absolute diagnosis between ulcer of the duodenum and disease of the biliary passage. However, on March 27th, 1906, her abdomen was opened; just below the pylorus, on the upper surface of the duodenum was found a thick scar, about the size of a nickel. The pylorus was narrow, the stomach dilated and hung low. I did a posterior suture gastro-enterostomy, after the new method of Wm. J. Mayo, published in the *Annals of Surgery* of April, that year, and got the patient back to bed in first-class condition. About four hours after the operation, she commenced, slowly, to collapse, and grew gradually worse, until the evening of the same day, when her pulse had reached 150 and was so small that it could hardly be counted; her respiration was labored; temperature slightly elevated, and she seemed in a desperate condition. Percussion revealed the stomach distended, until it reached from above the umbilicus to the pubis. Through the tube I washed almost half a gallon of dark, bloody fluid out when she seemed greatly relieved, and her condition improved somewhat. The next morning, about a quart more of the same kind of fluid was washed out of her stomach, while her pulse remained about 150 and her respiration about 40, during that day as well. She grew so weak that she could not speak above a whisper, and seemed upon the point of death. Thirty-six hours after the operation she commenced to take champagne, her pulse gradually grew slower, and of better quality, and in a day or two she was very decidedly better. Two days after the operation she had three large

bloody stools, and complained of being hungry. Five days after the procedure, she was doing finely, in every particular, and a week later taking general diet, without discomfort. She is now hungry all the time, and for the first time in twenty years can eat absolutely everything she wants.

No doubt, these hemorrhages came from the anterior lips of our visceral incisions. The posterior ones are united by a lock stitch, whereas, this is scarcely a physical possibility for the anterior lips. The Mayos re-operated on such a case, found the bleeding point, and ligated it, with ultimate success. However, I should never have dared to do anything of the sort, in the condition which my patient found herself, when a ligation was most urgent.

In my next case I will report a complication of the modern no-loop operation, the like of which has not yet been recorded in surgical literature. My friend, Dr. J. G. Mumford, of Boston, reported a case recently in the *Annals of Surgery*, which is somewhat similar. However, it differed from mine in that his was an abnormal subject to begin with, whereas nothing unusual was noted in the anatomy of the abdomen, with which I had to deal.

Mr. M., 50 years of age, had lost thirty pounds in two years. He had had a history of long continued stomach trouble, and taking everything into consideration, we were hardly able to state in his case whether we had to deal with a chronic ulcer, pure and simple, or the same thing, upon which cancer had been grafted secondarily. However, the need of an operation was apparent, hence on Oct. 25, 1905, his abdomen was opened and a thick, white scar, the size of a dime, marking the site of an ulcer on the anterior aspect of the pylorus was seen. There was distinct spasm of the latter, even under ether, so a posterior suture gastro-enterostomy was made, after the method of Moynihan, which, as those of you know who take an interest in stomach surgery, contemplates a twisting of the gut on itself, so that the jejunum falls from left to right, instead of in the opposite direction, which Dr. Mayo has just shown should normally obtain. Five days later, he begged for beefsteak, and at the end of a week after the operation, he commenced to vomit, this continuing until he retained absolutely nothing. We got him up on the 10th day and out in the yard on the 12th, trusting that this would have a beneficent influence, but at the expiration of two weeks from the time he was operated upon, the vomited material had a fecal odor, and further surgical interference was deemed absolutely imperative. Upon again opening the abdomen, we found the following astounding picture:

The stomach, which had been greatly dilated, was now shrunken and retracted so high up under the ribs that the greater curvature was higher than the point at which the duodenum passed through the mesentery, hence, the one-inch loop of jejunum, which had pointed downward at the completion of the first operation, now pointed up-



ward, the bowel being sharply kinked at the suture line. The efferent bowel was fiat, while the afferent was immensely distended, showing that no bile ran past the kink, but all was thrown from the duodenum directly into the stomach, and vomited. It seems that the modern short loop, or, as called by some, no-loop, has at least this one distinct danger, namely, that perfect gastric drainage may result in so much shrinkage of the organ as to pull the new opening higher than the level at which the jejunum originates and thus lead to a kinking, which would not be so likely to occur if the two points above mentioned were separated by six or eight inches of movable gut, as was formerly the case before the short loop came into vogue. In this case I succeeded with the greatest difficulty in making an entero-anastomosis around the kink, and had the satisfaction of seeing the lower bowel fill up at once. In addition to this, the patient never vomited again, but the second operation was too much for his feeble condition and two days later he died.

A recent case illustrates very nicely the inability of gastro-enterostomy to permanently cure certain of these benign cases. In July, 1904, I did a posterior suture gastro-enterostomy upon Mrs. K., then 41 years of age, who had, for many years, suffered all the classical symptoms of gastric ulcer. Several scars were found and her condition was so completely relieved by the operation that, for about eighteen months, she ate absolutely everything, gained some twenty pounds in weight, and was able to take up once more her work as housekeeper. Then in December, 1905, her old symptoms recommenced; she had pain high up and a little to the left of the median line, vomited frequently, this often having blood in it, got so that she could not eat solid food without distress, lost weight, and, in fact, became physically so reduced that she came to me begging re-operation.

On the 21st of April, of this year, I opened the abdomen once more and found the gastro-enterostomy opening, apparently as wide as I had left it, without even an adhesion around it, and the pylorus open as well. In fact, the mechanical status seemed to be all that one could desire. However, the stomach was adherent to my old scar in the abdominal wall, and considerably distended, hence I determined to resect the ulcer-bearing area, including the scar, and thus do away with whatever element of crippling this might produce. The operation was easily accomplished, and, to my astonishment, when the viscus was opened, I found three typical round ulcers lying side by side, on the lesser curvature, in spite of the fact that this stomach had two good points of drainage. As might be expected, the patient has recovered perfectly from her symptoms. She was up in a few days, and three weeks after the operation went home, eating a general diet, and expressing herself as being perfectly pleased with the outcome.

I just stated that resection has completely displaced gastro-enterostomy in the treatment of cancer wherever this is physically possible.

However, there are still a large number of patients whose fear, or, in some cases, I am sorry to say, whose physicians keep them from having an operation done, until that fortunate early period is passed, in which a resection is possible and feasible. It has been my misfortune to encounter quite a number of these patients, and to show what striking benefits are manifest for a short time after gastro-enterostomy in some cases, I will mention the following three:

Mrs. F., 54 years of age, came to be operated on the 16th of September, 1905, after having lost sixty-seven pounds, vomiting everything and living on fluids for many weeks. When her abdomen was opened, it was seen that she had a carcinoma at the pylorus, which had invaded the pancreas to such an extent as to render resection impossible. The stomach was immensely dilated, and, in view of her reduced condition, an anterior gastro-enterostomy was made with the button, not more than fifteen minutes being consumed in the whole operation. The next day she stated that she felt the greatest relief, being free from the annoying peristaltic movements for the first time in many weeks. She did not vomit again after the operation. Three days later she was up in a chair, and six days afterward was walking around, hungry, and begging to go home. Eight days afterward she ate general diet without distress, and on the ninth day was sent home feeling stronger than she had for a long time. On the thirteenth day she attended her son's wedding, took part at the repast which characterizes such occasions, when I last heard from her, a few weeks later, was rapidly regaining weight.

Mr. M., a saloonkeeper, had a simple Murphy button gastro-enterostomy done on the 24th of February, 1906. For days, previous to this time, he had vomited everything he ate and drank. He had lost seventy pounds in ten weeks and was in every particular a pitiable object. The day after the operation he was entirely comfortable and did not vomit again while he was in the hospital. On the eighth day he was up most of the time; on the eleventh, he was eating everything, and on the thirteenth went home apparently in first-class condition, gaining in weight, with no stomach symptoms. This day, less than two weeks after the operation, he was found tending bar by one of my assistants who chanced to visit his place of refreshment. Two and one-half months after the operation I saw him again, and he stated that his old pains had returned, showing that the dreadful malady was now reasserting itself, and he will, no doubt, soon pay the price, which an earlier radical operation might have saved him.

A third patient furnished the most striking example in all my experience of what can be done by gastric drainage in cancer of the pylorus. A few days ago, on the street in St. Louis, I met a plump, red-cheeked woman, who seemed to know me, and after a second glance I noted a family resemblance which led me to inquire after the condition of her sister, remembering that I had done a gastro-enteros-

tomy for cancer on one of three similar-appearing sisters, some months before. The lady smiled and said, "I am the sister to whom you refer." When she said that she had gained forty pounds since my operation of six months ago, it is readily understood why I mistook her for her overly-healthy relative. It is possible that our eyes deceived us in the character of her lesion, but several gentlemen, for whose knowledge of gross pathologic anatomy I have the highest respect, were present at the operation and confirmed my opinion that it was a cancer of the pylorus and lesser curvature, which had invaded the transverse meso-colon to such an extent that radical operation was not to be thought of. Further comment on this case is, I trust, unnecessary.

The faulty mechanics of our older methods in this work are well brought to light in the recital of a case in which I was recently forced to re-operate.

The patient is a Miss W., thirty-six years of age. My first operation in her case was done three years ago this month. There was a typical history of gastric ulcer with vomiting of blood and at the operation the lesion was found near the pylorus. I did a posterior, suture gastro-enterostomy with a loop about eight inches long, as was common at that time. In addition I short-circuited the loop by connecting the two limbs with a Murphy button.

Now the interesting part of all this comes when I relate that after six weeks of such health as she had not enjoyed for years, she commenced to vomit bile in spite of the entero-enterostomy and has continued to do so up to the present time, or rather, up to last month when I again opened her abdomen and found both anastomoses about the size originally made and the ulcer completely healed as far as the exterior of the stomach showed.

It is of value to have demonstrated in this way that bile will flow past an opening in the gut and gain access to the cavity of the stomach.

Since the second operation the patient has not vomited, and in fact I have demonstrated by lavage that there is not a trace of bile in the stomach. This second procedure consisted in cutting the bowel in two just above the entero-enterostomy and implanting the upper portion into the side of the lower. This completed what is known as the Roux "Y" anastomosis.

One of the more recent developments in stomach surgery has been the attempt to treat the dragging down tendency of atonic dilatation by gastropexy.

On account of the fact that the individuals thus effected are almost always neurotics and consequently hard to benefit permanently by any sort of treatment, one hesitates to attempt this operation. Especially did I enter upon this subject with trepidation in view of the fact that stomach surgery has had most of its failures to chronicle



in just this class of cases, in which formerly fruitless gastro-enterostomies and other drainage procedures were undertaken. However, some excellent names are behind this procedure and I have tested it twice.

One of these cases was operated upon four months ago and the second two months ago. The procedure and the subsequent history is the same in the two and, on account of the second being too recent to be of much value, I will recite the history of the first alone.

The patient was a woman thirty years of age, white and unmarried. She had suffered from pain in the abdomen at intervals since she was fourteen years old. Serious indigestion had commenced three years ago, without known cause. At first she had vomited a good deal but not much recently, and never any blood. A feeling of pressure and discomfort in the stomach region always commenced about an hour after eating. She is constipated and has lost in weight from 108 to 93 pounds. On account of the distress caused by food she has gradually limited her diet to eggs and milk. The pain is so great on standing up that she lies down most of the time, which gives more or less ease.

*Physical.*—The patient is a small, delicate, emaciated individual whose lower costal cartilages meet at a very acute angle. She complains of great pain when pressure is brought to bear in the middle line half way between ensiform and umbilicus. At about this point a transverse, sausage-shaped resistance can be felt which is tender on pressure. The stomach is dilated and extends with its lower border about two inches below the umbilicus.

*Operation.*—The abdomen was opened and the stomach found to be distended and lying so low that its minor curvature was not one inch above the umbilicus. The pylorus admitted my thumb and the duodenum was greatly distended in its first portion. To correct the displacement five interrupted silk stitches were used at intervals to unite the greater curvature to the anterior abdominal wall at about the former level which the lesser curvature had occupied. These stitches were placed a little more than an inch apart. The patient vomited a few times after the operation, but aside from this made a perfect recovery. Four days later she stated voluntarily that the dragging pain in the stomach region was gone. In a week she found that she could take soft food with very much less discomfort than before the operation. A few days later a forced general diet was commenced, the patient taking six small meals a day. Within four weeks from the time of the operation she had gained considerable in weight and in spite of the large amount eaten, remained completely free from digestive symptoms of any kind. Almost three months after the operation I heard from her physician that she was entirely free from the old dragging pain which had formerly caused her to lie down

most of the time, was eating everything and considered herself a normal individual.

I only trust that when a sufficient time to judge such a case has elapsed that her condition may remain satisfactory.

My personal experience with resection, as opposed to gastro-enterostomy whether in the treatment of cancer or of ulcer, has been so decidedly in favor of the former that I can not help expressing the hope, and indeed the opinion, that we will become more and more radical instead of less so in the treatment of all well-defined organic stomach lesions. No surgeon of the present date, who is at all conversant with gastric work, thinks of doing anything but a resection for malignant trouble where this is by any means possible, and I am firmly convinced that the same stand will one day be taken regarding surgical ulcer. I have seen gastro-enterostomy cure an ulcer patient immediately and for all time, but I have also seen a few results which were not ideal. However, the resection cases do brilliantly from the start and, other things being equal, they can be sent home with a much more positive assurance of definite cure than is possible where the simpler operation is done.

To illustrate the point I can not refrain from reciting the case of a gentleman whose stomach I resected only a few weeks ago. The history was.—he is fifty-five years of age, white, a business man and married. He has suffered from digestive trouble for fifteen years and, without going into details, I will simply state that this has been chiefly a matter of pain of a character so intense that morphine practically failed to give relief. He has vomited blood and had blood in the stools. The contents of the stomach are of an acid re-action and a mass the size of a lemon can be felt a little to the right of the middle line, two inches above the umbilicus. When the abdomen was opened this mass was found to be one of the largest callous ulcers that I have ever seen, in the lesser curvature, extending onto the anterior and posterior stomach walls with tiny nodules on the anterior wall and fairly large glands along the minor curvature. I did a resection after the second Billroth method, the whole procedure taking a little less than an hour.

The night before the operation he could not sleep for pain, and a few hours before it he vomited an immense amount of blood. However, after the procedure he never vomited again, has not had one twinge of pain to the present time, his pulse has never been rapid, he began to take a general diet on the tenth day, was up on the twelfth, went home within three weeks from the time he entered the hospital and tells me now that life is worth living for the first time in fifteen years.

The gastrectomy patients give practically this history without exception, while the same can not always be said where one contents himself with a gastro-enterostomy. In the instance under discussion it

would have been little less than criminal not to have made a resection on account of the possibility of secondary cancerous involvement and one must take into consideration the likelihood of cancer engrafting itself upon an ulcer where there are at the time of operation none of the external evidences which were present here.

I have not yet received the pathologist's report on this case so am not prepared to state definitely the character of the lesion, but in either event the patient has an excellent chance to remain well.

The time which has elapsed is still too short to enable me to say very much about definite results in the cases now under consideration. However, it is not without value or interest for my readers to know what has been accomplished up to date. In this connection I will consider only the patients upon whom I did gastro-enterostomy, resection and gastropexy.

It will be remembered that two patients died after gastro-enterostomy and two after resection. This leaves twenty-five of the former, five of the latter and two on whom the position of the stomach was corrected. Twenty-one of these patients suffered from benign and eleven from malignant diseases. I have only been able to keep in touch with eighteen of the former, two of these the gastropexies—as has been stated above, being in the best condition to date. This leaves sixteen benign patients.

Six of them had no more stomach symptoms since the operation, some being among my very earliest cases. One remained perfectly well for six months and then died of a lung affection. Four considered themselves cured for a period of several months, and may now be regarded as well at times, or one might better call them in general "improved," and I believe that these four patients would be reasonably comfortable if they could only be induced to live rationally. In two other cases it is still too soon to make any prognosis. However, I will state that both are completely free from symptoms a few weeks after operation and express themselves as being already recompensed for the ordeal by this temporary relief from pain, no matter what the future may have in store. Two of my benign patients received absolutely no benefit from surgical treatment.

I can tell more about my malignant cases than about the others, since I know the history to date of all the eleven who survived gastro-enterostomy or resection, making no count of the three whom I simply explored. It will be remembered that one resection and one gastro-enterostomy for malignant diseases resulted fatally.

There was the most marked immediate benefit in every instance. All of these patients stopped vomiting and commenced to eat very soon after the operation. Three of them lived nearly a year after gastro-enterostomy and of these three, two remained free from stomach symptoms and gained astonishingly in weight during the greater part of this time, while the third did about as well, excepting in so



far as weight is concerned, she being seventy-five years of age. One dropped dead on the street two weeks after leaving the hospital. In this connection it is interesting to know that he had just been able to eat a fairly hearty meal without stomach symptoms.

Four lived from two to six months after the operation with varying periods of freedom from symptoms. Three are now alive two weeks to six months after the procedure and at least two of them are in a condition of relative comfort.

I have attempted in the above to make out a reasonable plea for more and earlier gastric surgery. I believe I have shown that the work is not more dangerous than other operative lines, to which we all recommend our patients. The time is passed when we allow a sufferer from appendicitis, or gallstone disease, to go on gradually to death, or chronic invalidism, and shall we not now take the same common sense, business-like view of the stomach diseases, which have been shown to be highly amenable to surgical treatment?

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### TREATMENT OF ADENOIDS BY THE GENERAL PRACTITIONER.\*

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Every country practitioner of medicine has his fads, fancies and hobbies along some special branch of the healing art. The different fields of medicine give each a chance to show his inherent bent by rather specializing certain diseases.

Some select one branch and some another, just as his tastes direct. It is well that we do not all have the same likes and dislikes, or the medical world might never have known a Koch, Virchow or a Pasteur.

I do not claim to possess any extraordinary ability in treating this disease, but have chosen this subject because it has been much neglected by the general practitioner, although more frequently met with than generally supposed. Dr. Meyer, of Copenhagen, was the first to demonstrate the clinical importance of the hypertrophies of lymphoid tissues, situated at the vault of the pharynx. These hypertrophies have, however, been known since the time of Wm. Hunter.

*Etiology.*—It is chiefly a disease of childhood and adolescence, more common between the ages of two and fifteen years, and seldom seen after the age of thirty. Sajos informs us that "It does not seem to be due to any special diathesis, although, as shown by Lowenberg, a lymphatic temperament seems to predispose to it. The origin is probably traceable in all cases to a catarrhal state of the naso-pharynx, the causes of the latter being, therefore, the primary etiological factors." "In children the lymphoid tissue is especially susceptible to

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\*Read at the Annual Meeting, Jefferson City, May, 1906.

vascular changes on comparatively slight causes, and repeated colds from which they suffer keep the lymphoid tissue of the pharynx congested—over-fed, so to speak—and over-growth is to be expected.”

It is also said to be found more frequent among the Jews than the Gentiles.

The uric acid diathesis is claimed by some to be a cause of adenoids.

Sex seems to have but little influence in the development of adenoids, as they each reach about the same per cent. Heredity has been attributed by many as an exciting cause, which has been indorsed by Price Brown, Delevan and others, while Hajeck only found ten per cent of his cases apparently of hereditary origin.

Enlarged faucial and lingual tonsils, deformed hard palate, and deviation of the nasal septum have all had their ardent advocates and supporters as potent factors favoring the development of this disease but the theory advanced and promulgated by Sajos, that “the origin is probably traceable in all cases to a catarrhal state of the naso-pharynx,” is now considered one of the most potent causes of the over-growth of adenoid tissue.

The obstruction and stenosis of the nasal passage, as advocated by Greville MacDonald, Eames, Hopkins, Hill and others as a cause of lymphoid hypertrophy go far to support the theory advanced by Sajos as being the most frequent cause of naso-pharyngeal adenoids.

*Pathology.*—There is such a close analogy between the glandular tissues of the vault of the pharynx and the tonsils that Luschka was led to describe this tissue as a pharyngeal tonsil, which bears his name. Embryologically considered, the rhino-pharyngeal tonsil is the earliest to appear, the faucial next and the lingual last. They also undergo atrophy in like order.

Shurley says “adenoids are simply a hypertrophy of lymphoid tissue normally present in the pharynx and naso-pharynx. The lack of fibrous elements in the pharyngeal tonsil accounts for its friability.”

In all cases of chronic inflammation of glandular tissue we find the recuperative power of the part diminished in proportion to the severity and number of recurrent attacks of inflammation, and the hypertrophic process is but a result of the continued hyperplasia.

*Symptoms.*—The most prominent symptom which we observe is the obstruction to nasal respiration, from the filling up, more or less completely, of the naso-pharynx. The patient is obliged to breathe through the mouth, and this is followed by diseased processes in the pharynx and larynx. The voice has a muffled sound, a “nasal twang.” The child cannot sound the consonants “M” and “N,” and hence they can not talk plainly.

*Appearance.*—“The patient has a peculiar, stupid, expressionless countenance, drooping eyes, open mouth, noisy respiration, with continuous acts of deglutition, and there is often lack of development or a deformity of the thorax, with or without asthma.”

*Sleep.*—The patient is restless, tossing about in bed; distress in breathing, owing to the nasal obstruction; bad dreams, accompanied by nocturnal enuresis is sometimes observed.

*Appetite.*—Is often capricious. These patients often suffer from indigestion, as they do not masticate their food properly on account of obstructed respiration.

*Face and Chest.*—It is thought by some rhinologists that the naso-pharyngeal obstruction due to adenoids is a frequent cause of abnormal development of the superior maxillary bone, the high arched palate and the over-hanging of the front teeth over the lower set.

Also that the child's continuous efforts to get more air into the lungs and overcome the nasal obstruction is an important factor in producing round shoulders and flattened chest.

*Hearing.*—Difficulty in hearing is usually the first symptom to attract the mother's notice, and it is for this trouble that these cases usually consult a physician.

The extent of ear troubles depends very much upon the size and location of the growth. If the adenoid hypertrophy is situated high up, a comparatively small amount of growth will block the eustachian tube and cause auditory troubles; whereas, if it is low down there may be extensive vegetation without the tube being implicated. If, however, the pharyngeal vault is completely filled with lymphoid tissue, so that the fossa of Rosenmuller is obliterated, this mass pressing upon the eustachian tube cannot help having a deleterious influence upon the middle ear, and this influence extend to the labyrinth.

John Dunn, of Richmond, Va., explains the causes of deafness in cases of adenoid hypertrophies as follows: "Repeated inflammations of adenoid hypertrophies in certain cases cause a sclerotic process which, when once started, does not cease as long as there remains lymph tissue in the growths; its effects are not confined to the hypertrophies themselves, but a similar process may be determined by it in the adenoid stroma of the mucous membrane lining the eustachian tubes and middle ear.

Wokes asserts that ninety-five per cent. of the cases of naso-pharyngeal hypertrophies result in aural complications.

*Deaf Mutism.*—Floyd, in a recent article on adenoids, expresses the belief that upon strict examination, it could be found that the disease under consideration is the most frequent cause of acquired deaf mutism.

Aldrich reports adenoid vegetations occurring in seventy-three per cent. of deaf mutes; Peison, more than fifty per cent. while in healthy children it was observed in only one per cent.

*Respiratory Troubles.*—The occluded nose induces mouth breathing, which is injurious to the lungs, as "the supply of imperfectly prepared air engenders passive congestion of the mucous membrane lining the air tubes" and interferes with the proper oxygenation of the



blood, leaving the system open to the invasion of various morbid germs. The nasal stenosis may also produce auto-intoxication by the over production of carbon dioxide.

*Reflex Troubles.*—Headaches are infrequently cured by removal of the adenoid growths. Eustace Smith reports a case of laryngismus stridulus, or false croup, caused by adenoids, and cured by their removal.

I also wish to report a case of periodical convulsions in a boy twelve years of age which was cured by the removal of adenoids and circumcision.

Asthma has frequently been relieved by operations on the nasopharynx.

Among the many important symptoms of adenoids we have to consider, there is one which is attracting the attention of many investigators to-day, viz., the effects on cerebration.

Sisson, in his most excellent paper, "Naso-Pharyngeal Adenoids," says: "Those who have studied the conditions are agreed that the obstruction to respiration or other mechanical effects of these growths are utterly inadequate to account for the tremendous disturbances of nutrition, both bodily and mentally, associated with them, and relieved by their removal.

Dr. Harrison Allen long ago pointed out this particular form of mental impairment and defective intelligence, simulating idiocy, which accompanies even a moderate increase of adenoid tissue in the region alluded to, and advanced this hypothesis explanatory of the etiology. He pointed out the histological resemblance between the lower portion of the pituitary body and the pharyngeal tonsil, both being glandular in character, and shows anatomically a connection by means of a canal, which closes during fetal life, by which the top of the pharynx communicated with the interior of the skull, so that masses of glandular tissue must have originally formed a portion of the original pharynx.

Shurley refers to the effects on cerebration as follows: "The child is usually as stupid as he looks. This stupidity has, according to A. Jacobi and Solis Cohen, an anatomical basis in the relation between the lymphatic circulation through the brain to the nasopharynx. The presence of a large mass of hypertrophied tissue interferes with the proper drainage, so to speak, of the brain."

T. S. Fleteau gives an account of his experiments in demonstrating the communication of nasal lymph-passages with the subarachnoid space. He quotes a case of chronic hydrocephalus which got well after an abundant serous discharge from the nose. He states that Naunyn and Schreiber were able to inject warm salt solution into the subarachnoid space of the dog and make it come out at the nose, the phenomena being accompanied by protrusion of the eyes and chemosis.

Schwalbe, Key and Ritzuis demonstrated the existence of this communication. Flateau proves the correctness of former experiments by injection experiments of his own, but finds that, although injections into the subarachnoid space reached the nose, the injection of colored fluid into the nose did not, however, lead to an entrance of the fluid into the arachnoid space, on account of the obstruction presented by the columnar epithelium.

Dr. Woods Hutchinson says: "Not infrequently in early life a fibrous cord runs up through the body of the sphenoid, connecting the pituitary body and the pharyngeal tonsil, and it is not unreasonable to suppose that structures which were originally continuous may yet retain reflex sympathy with an influence upon each other's conditions."

"To say that such authorities as Osler, Dana and others have indorsed these statements only serves to increase their value. The results of this reflex, if such exists, are apparent to every neurologist. May it not be manifest in the backwardness and stupidity observed in the majority of children suffering from these conditions? The child has great difficulty in keeping up with his classes in school and is looked upon as being dull, and, as a result, is held accountable for that which he cannot help. Harrison Allen even ventured the opinion that there are many children in homes for the feeble-minded and idiots throughout the land who are victims of this condition, and who, possibly, could be restored to usefulness and their families by a comparatively trifling operation."

Pyncheon is inclined to regard the disturbances of cerebation largely due to autotoxemia from defective oxygenation of the blood and gastro-intestinal disorders.

"The sum total of these observations is that the pharyngeal adenoid, with the accompanying nasal occlusion, when not corrected, leave an indellible strain upon both the mental and physical condition, which will tell on the whole future existence, so that success and happiness in life may be hindered, and the ultimate physical power and efficiency inevitably more or less diminished."

*Diagnosis.*—The diagnosis may seem easy, owing to the prominence given some of its many subjective symptoms, but in all cases a thorough examination should be made of the nasal passages and nasopharynx. If we happen to be fortunate enough to meet with these cases in an adult we may use the rhinoscopic mirror to confirm our diagnosis, but as the vast majority of these cases are found in children, posterior rhinoscopy is impractical; therefore reliance must be placed upon digital examination.

Posterior rhinoscopy reveals so little of the actual growth that we cannot depend upon it with any degree of accuracy, and in all cases we should complete our diagnosis by digital examination, depending more upon what the finger reveals than the rhinoscopic mirror.

*Treatment.*—Effective treatment of adenoid growths is exclusively surgical. Local or medical applications are only palliative and do but little good. It is, however, advisable to use a mild cleansing antiseptic alkaline solution for a few days before operation in order to reduce the associated catarrhal condition of the nasal passages. This may also be used for a few days following the operation as an adjunct to the treatment.

As a preliminary treatment the syr. of iodide of iron or hydriodic acid may frequently be found beneficial as suitable internal medication for the improvement of the general health.

I will not attempt to mention the many different methods employed in the removal of adenoids, as each operator has his own favorite method. I will simply outline the method, seeming to me the the easiest, safest and most complete for the general practitioner.

Charles H. Knight, "thinks one of the best instruments for use in these cases is one which we are all provided, i. e., the forefinger. The forefinger will be found especially useful in young children in whom the growth is of recent development and friable in texture, or in the case of very young children in whom we do not wish to use an anesthetic."

My experience in these cases has been very limited, but in small children I have found the use of the foreigner to be a very useful and efficacious instrument.

If an anesthetic is used I prefer to have the child placed in the recumbent position, the head hanging over the table, as in this position the blood is not so liable to pass into the trachea. My choice of instruments under such circumstances are Gradel's forceps, Gotstein's curette and the forefinger; these are sufficient to meet all requirements.

*Conclusion.*—I have written this paper hoping to impress upon the general practitioner the importance of this subject, and hope that we may all become more familiar with the means adopted for its radical cure.

I also wish to indorse the measure proposed by my friend and former classmate, Hanau W. Loeb, in which he suggests that "the State should provide for the examination of all school children with a view of correcting this common affection and the symptoms which it occasions."

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A METHOD OF RADICAL RELIEF OF CASES OF DEAF-  
NESS LONG ABANDONED AS HOPELESS; ILLUS-  
TRATED BY REPORTS FROM ACTUAL  
PRACTICE.\*

BY ROBERT BARCLAY, M. D., ST. LOUIS, MO.

In the few minutes so kindly assigned me by your Committee, it will be possible to give you but a brief and bare outline of the proposition before us; and that, in but a simple and direct style. I trust, therefore, that you will grant me the indulgence of your attention and criticism, exclusively to the theme before us; and that you will graciously pardon the obtrusiveness of my effort, studiously to avoid all demonstration of facts now accepted generally by the ablest experts in this field of practice. With this apology for confining myself to as brief and bare a statement, as a clear understanding of our proposition may seem to admit, I would, first, ask your attention to the fact, that clinical experience seems to have demonstrated, that any very deaf person who speaks habitually in an abnormally moderated or low tone of voice, yet hears better in a noise or noisy place—please remember this!—who speaks habitually in an abnormally moderated or low tone of voice, yet hears better in a noise,—no matter how long he may already have been afflicted, and notwithstanding that every other remedial measure may have been tried in vain,—may yet be relieved by resection of the auditory conducting mechanism—by tympanic resection,—proportionately to the distinctness of these two symptoms: (once more!)—speech, habitually in an abnormally moderated, or low tone of voice, with hearing, better in a noise or noisy place.

If, therefore, among hopeless cases of deafness, you happen to meet one—particularly if he be a victim of so-called aural “catarrh”—who speaks habitually in an abnormally moderated or low tone of voice, enquire whether or not he can hear better when in a noise or noisy place. By the exercise of ordinary tact, anyone can secure, without impertinence, information, upon this point, sufficient to arrive, off-hand, at some approximately correct conclusion as to the nature of the condition underlying the deafness; and whether or not it might be such as would probably be relieved by this operation. For, if you receive an affirmative reply to your inquiry upon these points or symptoms—in more direct words, if you have met a person who not only speaks habitually in an abnormally moderated or low tone of voice, but also hears better in a noise or noisy place, rest assured, that you have met with a case of immobilization of the outer portion of

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the auditory conducting mechanism, and, as such, one presumably susceptible of relief by removal of this mechanical obstacle. These patients will tell you, that they are often asked to repeat by others, especially strangers, and frequently by members of their own household, to whom they may happen to have spoken, from time to time. They will tell you, also, that when many are talking at once, near them, as at a lively reception, their hearing is better; whereas, at a *tete-a-tete*, or in a quiet place, their hearing is not as good. Now, here, you have a test, approximately reliable; one which requires the use of no apparatus, no instruction, nor any preparation whatsoever, for its instant application; and one which once heard plainly stated, any of you, or even a layman, can apply, at any time, as a rule; and under any circumstances that admit of apparently casual conversation with the patient. Moreover, the facts may be elicited—the test actually made—without the patient's so much as even suspecting its import, or even becoming aware that a test is being made. When I state this, surely none of you need be ashamed to invest these few moments' thought in numbering this among your many practical attainments. And, as progressive men, every one, you will be especially interested to learn, that it is mainly because of the uncertainty and unreliability of other, and generally acceptable methods of identifying relievable cases, and the fact, that dependence upon those diagnostic methods has, so frequently and so unexpectedly, been attended by therapeutic failure, that otologists, discouraged, appear, one by one, to have abandoned these wretched patients, hopeless, to their fate; and not only have given up the operation upon the middle-ear structures in these cases, but have even gone so far as publicly, in the medical press, to denounce it. A few of us, however, more hopeful, perhaps, than the rest, have considered it irrational to condemn a potent therapeutic agent such as this, as harmful or even useless, simply because of results, however lamentable or disappointing in themselves, arising from the indiscriminate or inappropriate employment of such agent. Particularly, since propriety and reason affirm of this, as of every other resource, whatsoever, that its value lies not only in its application, but in its proper application. And as, occasionally, we have met with marked instances of the undoubtedly advantageous application of this remedy, obviously beneficent, failure or disappointment has but strengthened our determination to perfect the search for the exact indications for its employment. Working alone this line, then, practical experience leads me to offer you, briefly, the following suggestions:

Deafness, long abandoned as hopeless, is usually due to one or more of three chronic conditions:—"Nerve-deafness;" "Mechanic's-ear;" and "Immobilization of the Auditory Conducting Mechanism." Chronic immobilization of the auditory conducting mechanism is a condition affecting sometimes only the inner, sometimes the inner

and outer, and sometimes only the outer portion of this apparatus. With the latter and its consequences attending the former we have but to deal, on this occasion: for, of this latter condition I have emphasized what seems to have been proved, clinically, its pathognomic symptom-complex. Briefly, I would state, that when the outer portion of the conducting mechanism has become immobilized, from whatever cause or condition, sound-waves arriving, aurally, from without, find their force transmitted to the deeper parts with the greatest difficulty—while all the parts concerned are in a quiescent state in a quiet place:—and, here, the patient is deafer. Amidst a noise or in a noisy place, however,—as in a moving street-car or railway-train—the parts, elsewhere, in quieter surroundings, immobilized,—are shaken more loosely from their abnormal degree of attachment to each other and to surrounding parts, thereby liberating them to such a degree, that speech of ordinary pitch and volume, and other sounds of more fixed intensity—as of the bells, gongs, passing cars, whistles, etc.—become more readily audible, and the individual is thereby enabled to enjoy the hearing of sounds which, in quieter surroundings are absolutely unheard at all.

Again, sound-waves generated within the patient's own head, in the performance of the physiological functions of mastication, deglutition, phonation, etc.—seeking exit through the tissues of the head and ear, meet with abnormal resistance upon reaching the immobilized outer portion of the auditory conducting mechanism, and their force is thereby echoed inwardly, whereupon it passes toward the normally movable parts, lying deeper, and to the perceptive apparatus within. The voice for example is thus heard not with the usual normal force, but re-enforced by this echo; sounding, therefore, to the patient more loud than it actually does to any other person at his side or near him. It thus happens, that, in order to give his own voice, what appears to him a normal volume and pitch, he unconsciously and habitually lowers or moderates his own voice to a markedly abnormal degree. If, however, there is deeper fixation or if there be labyrinthine or nerve deafness, his perceptive apparatus will not be sufficiently excited for him to appreciate his own voice as of normal, but, as of subnormal pitch and intensity, and he will therefore habitually raise both pitch and volume of his own voice. Thus you have an approximately certain method, by this test, of arriving at a definite idea and probability as to the nature of his deafness.

Immobilization of the outer portion of the auditory conducting mechanism is due as a rule to one of two processes: *otitis media purulenta*, or so-called "running-ear"; and *otitis media catarrhalis*, or so-called "aural catarrh."

Now, the underlying condition of altered tension, mobility or inertia, or combination of these, in one or more parts of the outer portion of the auditory conducting mechanism, affects the inner portion



of this mechanism, impairs its normal mobility and operation as a mechanical unit or lever—disturbs labyrinthine tension—and acts as an obstacle to the normal transmission of the force of sound-waves to and from a functionally active labyrinth and auditory nerve within:—a condition, as you very readily understand, necessarily attended with chronic progressive deafness. Sooner or later, as a rule, these patients complain of other most distressing symptoms, for the relief of which, frequently, they are driven to us, perhaps, long after they have abandoned all hope of relief of their deafness—in some cases, indeed, after many, many years; as in the cases I shall cite to you, later, in illustration, a number of which have already been reported in the medical periodicals.

Any of the following may occur with the deafness, as concomitant symptoms:

Dizziness;

Discharge from the ear;

Habitual speaking in an abnormally moderated or low tone of voice;

Better hearing in a noise (worse hearing in a quiet place:) and Aural distress.

Now, several of these symptoms are common to cases of deafness—whether from catarrhal or from purulent middle-ear disease.—arising as they do, in either case, from the similar underlying physical condition named above. And the question of their susceptibility of relief, resolves itself into that of the possibility or impossibility of relieving that underlying physical condition of immobilization of the outer portion of the auditory conducting mechanism.

I ask you specially to remember, that we are treating upon this occasion, of cases which have not responded to the usual and established methods of treating catarrhal and purulent otitis media: cases, which, from time immemorial, have been generally abandoned as intractable, and are, almost universally, found hopelessly incurable by all ordinary methods of treatment; cases which, after having stubbornly resisted the curative influence of ordinary remedies, at the hands of presumably qualified practitioners for years, have, at last, lost all hope of relief of their deafness.

These are the cases which I have referred to, on the one hand, as “popularly deemed hopelessly incurable;” and, on the other, as those of “hopeless deafness.” These we meet—many of them, under the test given you today, presumably susceptible of relief by tympanic resection—helpless, socially, ostracised and wretched—drifting about amongst us, abandoned to their fate—a prey to advertising quackery and the vendors of artificial ear-drums and other fakes—a living reproach to the therapeutic impotence, special ignorance, or—more discreditable still—stolid indifference of the Medical Profession generally. I say “many of them susceptible of relief;” and I speak ad-

visedly. For, as I write these lines, I can recall the names of at least a dozen individuals, of independent means, and with every social advantage, who, I have every reason to believe, could be, perhaps to even a greater degree than I now suspect, at once and permanently, relieved of their disability by this surgical procedure; yet their family physician does not speak the word; and, "ethically," others must not. And if the opportunity, thus, casually to notice this, has been so frequently afforded me, even in my limited social circle, how much greater must be the opportunity afforded others—yourselves, and the Medical Profession generally—in your wider and more varied acquaintance and practice. This opportunity must not pass any longer unimproved. And I feel confident, that you, as progressive Medical men, will cheerfully give this subject your more earnest study and attention, with a view to satisfying yourself as to the expediency,—I might almost say, necessity of the operation, based upon the application of the test proposed; and that you will exercise your prerogative in spreading about more widely the knowledge of any measure—especially this one,—that will enable us to offer such reasonable hope of relief as this does, to even a single one of these unfortunates.

In these cases, I have told you, the deafness, and other symptoms above named, arise, in every instance, from a similar underlying physical condition.

Whether this underlying physical condition obtains in catarrhal or in purulent inflammation of the middle-ear, in any given case, is immaterial, so far as regards the principle that is to guide us, in our effort to afford relief of the deafness. That principle is:—to eliminate the aforesaid underlying physical condition of altered tension and mobility in the auditory conducting mechanism, still movable, from the permanently immobilized portion without; while making provision, also, for natural drainage, and for admission of incoming aerial sound-waves, directly to the deeper, still movable portion of the auditory conducting mechanism and labyrinthine nervous apparatus within; while providing for free exit of outgoing sound-waves, generated by physiological functions within the body, normally seeking exit through the tissues of the head and ear.

An additional feature, however, presents in such cases, if the deafness be attended by discharge from the ear—active purulent inflammation of the middle-ear. For, here, we are concerned not only with the correction of abnormal tension and mobility of the conducting mechanism, but with putting a stop to an actively destructive and infectious process; the problem, here, therefore, involving, as well, that, especially, of establishing free drainage, removing diseased products, quieting irritation, and keeping the affected parts clean and disinfected. Where, in such cases, this can not be accomplished by medicinal means, whether or not the mastoid cells have already become involved, the method of tympanic resection should be resorted to, in-

asmuch as, the so-called "mastoid operation," alone, in such cases, is, at best, an illogical, imperfect, and unnecessarily hazardous resource,—mentioned here, only to be, by itself, unqualifiedly condemned.

The appropriate details of such surgical procedure are peculiar to each individual case, and are to be estimated, and put into execution, modified in detail, step by step, as the surgical and anatomical conditions confronting the operator may indicate, throughout; the best guide being the judgment of the operator—it being assumed, of course, that the case is in the hands of one, practically familiar with the surgical anatomy and physiology of the ear, and thoroughly skilled in such difficult, deep aural surgery. In my own experience, the form of operation most frequently indicated in the old hopeless cases, has been that, effecting the removal of the drum-head, hammer- and anvil-bones;—the stirrup-bone, also, being occasionally removed; and bands, synechiæ septa, growths, etc., dealt with as indicated, sufficiently to liberate and expose the more deeply-lying auditory structures. This, not only eliminates the defects of drainage by the natural route, in the cases of discharge from the ear; but, in the "catarrhal" ones, so exposes the mucous membrane of the drum-cavity, that it undergoes a progressive, skin-like or dermoid transformation, with disappearance of the mucous glands as such.

The beautifully constructed, delicate aural surgical instruments of the present day, together with the visual and manual dexterity of the expert specialist—essentials of perfect surgical technique—ensure rapid, accurate, and thorough operation. To avoid consequent supuration, in dealing thus, surgically, with the middle-ear, one should meddle with the uninvolved parts just as little as possible. Of course, if one insufflate a lot of stimulating powder,—iodoform, etc.,—or liquid,—or push gauze or cotton down into the depth of the ear, there must, necessarily, be a reaction by the membrane and tissues covering the parts so meddled with. Extreme care is today exercised, both during the performance of the operation and afterwards,—to avoid any manipulation or procedure whatever, that might, even in the slightest degree, tend to injure or irritate the remaining structures of the drum-cavity. Careful attention is today given to the diet and general condition of the patient. In short, every precaution is taken towards simplifying the operation of today; so far, that secondary inflammation is unlooked for; and a reformation of membrane at the site of the normal drum-head—the so-called "substitutive drum-head"—is exceptional. And even when such membrane does form, it is readily removable under local anaesthesia; and is eventually disposed of thus, either with, or without the application of Traumaticin, containing a little Salicylic Acid, and by restricting the patient's diet for a variable period.

Respecting the further effects of immobilization of the outer



portion of the auditory conducting mechanism, and the *rationale* of tympanic resection as a radical remedy therefor, we should duly consider the following facts:—

With immobilization of the outer portion of the auditory conducting mechanism, we may find a defective condition of the auditory nervous, perceptive apparatus. Where the latter is due, partly, to abnormal labyrinthine tension; partly, to deficient exercise of the auditory nerve-terminals, through infrequency or weakness of such sound-waves as manage to reach them; and partly, to psychic-emotional depression, attending the affliction of intractable chronic deafness, with aural vertigo, or head-noises—this operation is indicated. And it operates beneficially, not only upon the one ear, but also upon its fellow of the opposite side; and for the following reason:—abnormal tension of the outer portion of the conducting mechanism of one ear, may produce abnormal tension of the inner portion and labyrinth, so far as to impair the function of its special nervous apparatus—the auditory nerve and its auditory centre. The auditory nerve-centre of one ear, normally, furnishes a portion of the nervous supply of the fellow ear. When, therefore, the functional activity of this auditory centre becomes impaired by abnormal tension in the one ear, the fellow-ear will so far be deprived of its normal nervous supply, and will suffer in consequence. If, on the other hand, the condition of abnormal labyrinthine tension, in the ear first afflicted, be resumed, by timely resection of its outer conducting mechanism, this entire chain of morbid phenomena may be released, and the fellow-ear rescued. Practically, this fact has been demonstrated, conclusively, by extended clinical experience with the operation, as illustrated in the report of cases which follows below.

In cases, therefore, where abnormal labyrinthine tension, in the ear first affected, would probably be reduced by this procedure, even when there appears probability of but slight benefit to the hearing of this ear, the operation seems generally advisable: inasmuch as, it tends, so far as observed, to conserve the hearing of the opposite ear, which, otherwise, would inevitably have become impaired.

In dealing, then, with the condition of abnormal tension or immobilization of the outer portion of the auditory conducting mechanism,—which you may recognize, off-hand, in cases of deafness, long abandoned as hopeless, by the presence of habitual speaking in an abnormal or low tone of voice, associated with better hearing in a noise or noisy place,—we might submit the following formula as a maxim:—

As soon as it is evident that ordinary and time-worn methods are powerless to cure, this radical operation should be resorted to,—and without unnecessary delay—as neglect to remove the obstacle in the outer auditory conducting mechanism, only keeps the more deeply lying parts, the longer, without exercise of their normal functions, af-

fects the tension of the deeper portion or labyrinth, and, in so far, tends to impair them, as well as to involve the function of the opposite ear. For the sake of the other ear, then, even if there be hope of but slight benefit to the hearing of the first ear, this method should be employed.

And, this operation is advisable, only where this condition is not amenable to medicinal, hygiene, or other non-surgical treatment. Where the more deeply-lying parts would, obviously, not be mechanically affected by such procedure, it is not admissible.

Remember, please, that when resorted to for the radical relief of cases of hopeless deafness, this operation is only designed to effect, by force, the elimination of the mechanical condition of altered tension and mobility in the outer portion of the auditory conducting mechanism—a condition which you may recognize, off-hand, by the presence of habitual speaking in an abnormally modulated or low tone of voice, associated with better hearing in a noise or noisy place.

The report of cases which follows, will, I think, demonstrate to your entire satisfaction, that tympanic resection can, and that it does, relieve cases of deafness, which respond to the test of these two associated symptoms; and that it does so invariably. Moreover, these cases demonstrate, that, even in the so-called “mixed” or complex cases, where this pair of symptoms are present, relief of the immobilization of the outer portion of the auditory conducting mechanism, by the performance of tympanic resection, invariably, amplifies the range and degree of auditory conductivity; operates as an auxiliary to production and, oftentimes, restoration of function to the deeper parts, to a gratifying degree; and, in other respects, relieves such symptoms as are due to the presence of mobilization of the outer portion of the auditory conducting mechanism.

In casting about, amongst my clinical records, for cases manifesting these two associated symptoms, I have, first, gathered those, where these symptoms were marked, and, then, those where they were more or less obscure; finding in each case, as is usual, more or less phenomena due to associated abnormal conditions, other than that of immobilization of the outer portion of the auditory conducting mechanism. No case of pure and simple immobilization of the outer portion of the auditory conducting mechanism appears amongst the cases, here, below, reported; and in an immense experience, I have found such cases, of inflammatory nature, extremely rare, if indeed, theoretically, they exist at all, in the advanced stages of such disease.

In selecting from this clinical material, matter for this purpose, I have been guided, mainly, by the duration and obstinacy of the various cases presenting,—regarding as intractable or incurable, in popular estimation, such cases only, as, after having stubbornly resisted the curative influences of all ordinary remedies, at the hands of presumably qualified practitioners, for years, had, at last, been

abandoned as hopeless—those cited below having been diseased, for from twenty to thirty-four years or more.

In my final selection, I have given preference to those cases, whose clinical features are of the character most frequently encountered; and, as the physical conditions, in the various cases, seem to correspond so imperfectly and so irregularly to the intensity of the various symptoms, I have, with slight exceptions, omitted all mention of them—preferring to report each case in its clinical aspect, as it seemed to affect the patient, and, then, to demonstrate the relief that was later experienced by him. Wherever admissible, therefore, I have quoted the patient's own words, whether spoken or written—to describe his own symptoms and experience, whether before or after operation; and, rather than edit, have fearlessly reported *verbatim* anything of a laudatory character to myself, when part of the patient's sentence describing his own estimate of his experience; omitting, of course, all other matter of personal interest or reference to myself in the case. This has seemed the best way to give you the most correct impression of the effects of the operation, as estimated by the patient, himself or herself, and by his or her relatives and friends.

All patients thus operated upon by me, are instructed to return to me promptly, after dismissal if symptoms return, if, otherwise, the result does not prove satisfactory to them.

Whatever the opinion of others, respecting the indications for or against the operation of tympanic resection, in these cases; and however these be respectfully and carefully considered—the clinical results of my own practical experience with the method of differential diagnosis, herein advocated, and of surgical interference, when thereby indicated—as illustrated in these few of my cases that we may have time to consider here,—will, I trust be deemed sufficient to demonstrate, to your satisfaction, its advantages, for the purpose for which it has specifically been advocated upon the present occasion.

REPORT OF ACTUAL CASES OF DEAFNESS LONG ABANDONED AS HOPELESS, IN WHICH IS DEMONSTRATED, THE DIAGNOSTIC SIGNIFICANCE OF HABITUALLY MODERATED OR LOW TONE OF VOICE, WITH BETTER HEARING IN A NOISE, AS AN EVIDENCE OF IMMOBILIZATION OF THE OUTER PORTION OF THE AUDITORY CONDUCTING MECHANISM; AND ITS IMPORTANCE, IN SUCH CASES, AS AN INDICATION FOR THE EMPLOYMENT OF SURGICAL MEASURES FOR ITS RADICAL RELIEF.

*Nearly twenty-five years.*—A very deaf lady, forty-six years of age, consulted me, stating that she had been thus deaf from catarrh for nearly twenty-five years.

At the time of our first consultation, it was noted that she spoke in a very low and hollow-tone of voice. Then, all sounds were heard



by her better with the right ear, which could be made to hear a loud whisper. The left ear was practically deaf to all ordinary sounds, except "sharp" ones. Upon a moving street-car, she could hear so much better that nearly everything was heard by her, even conversation not intended for her ears. After leaving the car, this improved hearing persisted for a short while, when she became deafer than before, and suffered from headache. Nervous excitement was always attended by better hearing. The clacking noises of a machine-shop always caused ear-ache. Sounds of horses' hoofs were inaudible to her unless standing right at the curbstone. The motorman's gong and conductor's signal-bell were audible to the left ear from the pavement; to the right, from an open second-story window above; these sounds being inaudible to her when the window was closed. Only the very highest-pitched tones of a large Number 2, Regina Music-Box were heard by her with her ear just off the box; the music being audible only on actual contact with the box. By careful harkening, she could hear with the right ear, news-boys' shouting across the street; with the left, only when directly alongside. Even with both ears, she could not hear the singing of a choir outside the open door of her room; nor could she distinguish the words, nor any but the highest tones of friends, singing in her own parlor. Her own front-door-bell was inaudible to her unless near by it; and she could not distinguish the sound of a horse or vehicle crossing a three-plank bridge one-hundred-and-fifty yards from her home. Band music was inaudible to her unless but a short distance away. The rustle of leaves in the tree and the song of the locust could not be heard with the left ear; nor could she bear the clang of a scissors-grinder's advertising-chime, as he pushed his cart beneath her second story window. Only when alongside, could she hear the lighting of a parlor-match. Her husband's voice was heard with the left ear at about two-feet; my own ordinary voice at less distance. Tuning-fork tests showed that her hearing was reduced seventy-five *per cent.* for single tones in the middle octave of the human voice. The watch was heard by either ear on pressure-contact only. The lower tone-limit of hearing of the right ear was a trifle below sixty-four vibrations a second; of the left, considerably above this.

Concealed from me at the time, was the fact of her suffering additionally profound deafness and severe high-pitched "ringing in the ears," with profuse menorrhagia, at each return of her monthly sickness; and that the exsanguination was attended with exhaustion and even dizziness, with faintness,—upon one occasion, actually ending in a so-called "dead faint."

Sometime after the second ear had been operated upon, the family-physician, in joint attendance upon the patient, discovered, that the menorrhagia was due to a bi-lateral laceration of the cervix, with subinvolution of the uterus. This was later operated upon by him.

with prompt and entire relief of its attendant symptoms:

With the patient's consent, the left, or worse ear was operated upon—the right, seven weeks later. In each instance, the nervous condition of the ear of the opposite side also was at once appreciably improved, and proportionately to the increased conductivity in the ear just operated upon. Gradually they have approached a similar condition, until, at last examination, there was, as far as I could detect, no marked difference between the hearing of the two ears.

After the operation upon the worse, or left ear, upon recovering from the anaesthetic, in bed, the patient spoke of hearing a flood of noises; and first of hearing the sound of horses' hoofs coming through the open window of her second-story room. About the third evening later, she recognized the voices of news-boys, "crying" their papers out on the street below. About the fifth evening, she first heard the news-boys, whistling, outside. One week after the operation, she heard the choristers singing in the hall, outside her room; and, standing in the doorway, could hear their words also. From a house, one-half block away, opposite her window, she could distinguish the echo of a school bell five blocks away in the opposite direction. The sound of a car-bell was now audible to her from her bed. She could hear my ordinary voice, three or four feet away; and her husband's at six feet. A little later, she could recognize the song of locusts and the sound of leaves a-rustling in the wind. Then, she found that she could distinguish, and recognize, from her bed, the different news-boys' voices, in the street below. The clang of the two higher, of the three bells, forming the scissors-grinders' advertising chimes, were heard by her, soon after the operation; the third, a low-pitched one, about five or six weeks later. One day, about this time, while sitting reading, she was startled by the sound of a pistol-shot, *as she supposed*, coming from the hall. It proved to have been nothing but the striking of a parlor-match outside the open door. Seven months after the operation, her husband informed me that her hearing had still further improved, so far as to enable her to hear her front-door-bell from the attic of her home, with all doors closed; that she, quicker than he, invariably recognizes the sound of a horse or vehicle crossing the three-plank bridge one-hundred-and-fifty yards from their home; that she can at once recognize any tune played by her Regina Music-Box, even when in an adjacent parlor; and that she very frequently overhears, even at twelve or fourteen feet distance, disputes and conversations, which others believe they have concealed from her by lowering their voices, as they supposed, sufficiently therefor. A year after operation, I learned through her husband and her physician that upon a recent occasion, others observed that she had her attention attracted by the fall of an ordinary brass pin, which dropped from her neckwear, while standing upon her wooden porch at home; and that, upon their asking her whether she had *actually heard* the pin "drop,"

or not, she replied, that she had heard it. At that time also, it was reported that the hearing still continued to improve; and that the annoying symptoms—noises in the head and ears, etc.—which had been relieved by the operation, had not returned.

In her reply to a copy of the foregoing report, since sent the patient, she wrote me: "The report you have made of my ears, while under your care, and for years before consulting you, is certainly fine, and so minute in every particular way, that I can not find one flaw in the whole article. My hearing is so much improved now, I feel as though life is worth the living for, etc."

Eight years have now elapsed since the operation was done upon this lady's ears.

*(To be continued.)*

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### REPORT OF A CASE OF OVARIAN TUMOR.\*

BY ELMO P. PORTERFIELD, M. D., ST. LOUIS, MO.

and

JNO. D. PORTERFIELD, JR., M. D., CAPE GIRARDEAU, MO.

Mrs. V., age forty-eight, German by birth, married at the age of twenty-nine. The mother of five children, two living, three miscarriages. The miscarriages were followed by severe hemorrhages and great weakness. She was confined to her bed three weeks during the last miscarriage, evidently caused by some infection. These miscarriages occurred during the first three years of her married life. As a young girl she was always well and strong, menstruated at the age of fifteen, was always regular, lasting four or five days, never associated with unusual pain.

The present trouble dates back to her last confinement, five years after marriage or fourteen years ago.

A small mass about the size of a dollar appeared in the right side over the region of the ovary, which was painful at times.

This mass made a slow and steady growth, gradually increasing in size; coming up from the right side it finally extended over near the median line and from month to month the growth was perceptible. During the gradual growth there was at times severe pains through the bowels and tumor mass. Numerous attacks of colic and indigestion were among the daily symptoms. The entire abdominal cavity soon became occupied by the tumor; pressing intestines, bladder and other abdominal viscera out of their normal position, causing considerable dyspnea, frequent urination and chronic constipation.

A slight elevation of temperature was noticeable, at times ninety-nine to a hundred, during the days of the growing process, which must have been due to the absorption of toxines produced by constipation. Edema of the vulva and lower extremities was a constant

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\*Read at the Annual Meeting, Jefferson City, May, 1906.



symptom, after the tumor had reached sufficient size to produce pressure on the blood vessels leaving the pelvis.

She weighed 170 pounds one month after this confinement, but as the tumor increased in size she began to lose weight very rapidly and developed a sallow complexion similar to that of carcinoma. She gradually grew weaker, thinner and depreciated in general health.

One year ago she had typhoid fever which lasted six weeks and during this time was in a critical condition.

About a month after her convalescence from typhoid fever a consultation with their family physician revealed, upon examination, that we had to deal with some form of abdominal tumor.

Inspection revealed a full and distended abdomen, full and rounding showing no point of depression. Smooth surface on both sides, but on palpation, a very distinct notch could be felt over the umbilicus, which resembled the notch of a spleen of malaria, or one undergoing amyloid degeneration. The tumor was movable laterally, to a limited extent. Percussion showed general dullness over the entire mass with the exception of a small area of fluctuation over the central portion. The lateral abdominal regions, or flanks, were tympanitic. There was no change in the area of dullness upon changing the position of the patient, which would be characteristic of ascites.

By pressing the hand firmly against the abdominal wall and gradually bringing it across the tumor, it was noticeable that there was a firmness, or solid resisting mass present. By auscultation nothing of diagnostic significance was revealed. Vaginal examination was made and the firm mass could be felt on both sides, in about the same proportion. The cervix was pale, soft and easily movable and did not show evidence of any connection with the tumor.

Upon introducing a uterine sound it was ascertained that the uterus was of normal depth and the fundus uteri movable.

The examination of the urine did not show any traces of albumen or sugar and was normal in every respect.

The patient was so weak that to operate at once would have proved fatal and she was sent to the hospital. We began a process of nourishing, feeding her all forms of good rich food, milk, eggs, and wine, with the hope that she could be built up strong enough to withstand the surgical shock usually produced in these cases.

Free elimination of bowels and kidneys was produced, small doses of strychnine were given as a tonic and stimulant to the heart. She began to improve, and as time passed on, it was very perceptible that she was gaining more strength.

After having her under preparatory treatment for a month we decided that she was as able as she would ever be to stand the operation. On the morning of August 10th, 1904, she was given the usual preparatory treatment for abdominal section.

The patient was anaesthetised with ether and placed on the table in the Trendelenburg position. A straight laparotomy was performed and upon opening the peritoneal cavity fully a pint of amber colored serous fluid poured out, which was quickly relieved by using large gauze packs.

The parietal peritoneum was highly congested, and inflamed fully six inches around the incision, which with the exudate, was evidence of there having been a localized peritonitis present.

Passing the hand into the abdominal cavity, between the tumor and abdominal wall and carefully bringing it around the mass, several varieties of adhesions were found to be present. Some of them long thin flat bands, evidently old adhesions: some soft, thready, friable and very vascular. The same conditions existed on both sides of the tumor.

The firm long bands were clamped and ligated, the soft friable adhesions were freed by carefully passing the hand around the tumor.

Hemorrhage from adhesions was severe but was controlled by applying hot gauze packs.

An attempt was now made to lift the tumor out of the cavity, but we found that it could not be brought through the incision. A large ovarian trocar and rubber tubing was used, and the trocar placed through what seemed to be, a cystic portion of the tumor, and drew off fully a quart and a half of bloody degenerated fluid.

Not being able to deliver the tumor the incision was enlarged. With a pair of heavy tenaculum forceps we succeeded in getting the tumor out of the cavity, but now came to what seemed to be a more serious complication. A large knuckle of intestine was firmly bound down in the notch, or between the two lobes of the tumor. A part of the attachments was very vascular, and a part was composed of old adhesions. The vascular adhesions were teased off with a gauze sponge and hemorrhage controlled by hot gauze pads. At one point of attachment we were compelled to cut away a small piece of the tumor to prevent injury to the intestines, which later was whipped over with catgut, to prevent any secondary adhesions forming. The tumor was now free from adhesions, and was brought out of the abdominal cavity and covered with towels wrung out of hot salt solution. Ligation and amputation of the pedicle was the next step to be considered. The pedicle being long and thin and the blood vessels being easily located this step of the operation was quite easy. A large clamp was then placed across the base of the pedicle and the ovarian artery ligated. The tumor was cut away and bleeding controlled by ligature. The stump was whipped over with continuous catgut suture. Carefully noticed the stump of the pedicle and finding that safe hæmostaxis had been secured, proceeded to care for the toilet of the peritoneal cavity.

Having spilled some of the dark, degenerated, grumous, tumor

contents into the peritoneal cavity decided best to flush the peritoneal cavity with hot normal salt solution. The peritoneal cavity and vault of the pelvis was then dried with sponges on long bladed forceps. The peritoneum was then closed with continuous catgut suture, through the muscles and the fascia, and the skin finally brought together with interrupted silk worm gut suture, four to the inch. Plain gauze dressings were applied to the wound and adhesive straps put on to hold the same in place.

The operation was associated with profound shock. Large beads of perspiration stood out on her forehead; hands and feet were cold and clammy, face wore an anxious, pinched expression. Temperature 97, pulse 150, respiration 44, and pupils contracted.

Hot bottles were wrapped and placed around her in bed, hypodermics of strychnine 1-30 was given every three hours. Normal salt solution, temperature of 100 was given subcutaneously on the inner side of both thighs and gently massaged to hasten absorption.

A nutrient enema of hot coffee 4 oz., brandy 1 oz., salt solution 4 oz., was given and retained.

There was quite a decided response to the use of the salt solution: while the pulse was weak and thready it changed in volume and became stronger. Strychnine sulphate 1-30 and calomel 1-10 were given every three hours during the night, and at eight o'clock the next morning the patient was some better. Bowels had moved three times and temperature was 99, pulse full and about 130 per minute. Salt solution, two quarts in amount, was again given subcutaneously, this time being placed underneath the mammary gland, which readily absorbed it.

Many points were under consideration as the treatment for the surgical shock demanded. With such rapid pulse and cold hands and feet it was necessary to remember the possibilities of secondary hemorrhage due to slipping of ligatures of the pedicle, and capillary oozing produced from the raw surfaces of the intestines where the adhesions had been freed. The pulse was watched carefully and as the time passed it seemed to improve in volume, until a pulse rapid, but full and strong was present. This proved to us that there was no hemorrhage and convinced us that surgical shock was the patient's greatest trouble; and all methods of treating shock were held in readiness in case the patient should have any change for the worse.

The next morning to our surprise, we found the patient with a temperature of 101, pulse 140, respiration 43, abdomen was perfectly flat and no tympanites. That evening the temperature went up to 102, pulse rapid and respiration fast. We were very much alarmed about the patient and almost convinced there was some infection and pus formation present, still the symptoms of peritonitis were absent. Abdomen was flat, bowels had moved freely that day and there was no vomiting. About three o'clock that morning temperature went up



to 103, pulse 144, respiration 46. We began to believe there was infection of the peritoneal cavity and that it would only be a short time until general peritonitis would be present. Our first thought was to open her up and put in a glass drainage tube, but we could not bear the idea of opening a flat abdomen for drainage. We thought of the vaginal route but still were a little uneasy about draining by this method. Finally decided to wait until the next morning and the next morning, to our surprise, her temperature was normal and remained that way until her recovery. There was not even a stitch abscess and union was by first intention. The wound healed and the stitches were taken out on the sixth day. The patient remained in the hospital four weeks after the operation and then went home where she gradually increased in strength and weight.

*Microscopic Examination.*—Several sections were made and all showed the same conditions: Ground substance was fibrous, containing numerous solid cellular cords and arranged in a manner like lymph spaces. The connective tissue was fibrous and followed by lymph vessels and lymph spaces, lined by proliferating epithelioid masses. These cords of cells appeared like cellular cylinders of large diameter or as small strips of two layers of flat cells branching at intervals.

The large endothelial cell masses had numerous lumina containing mucoid material. The cells (endothelial) contained small nuclei and the net-like proliferating endothelial cells were quite prominent.

The conclusions drawn, if done hastily or by one not on the lookout, would very likely diagnose this case as adeno-carcinoma and which in all probability was originally a cyst-adenoma of the left ovary and in the walls of the cyst arose the endothelioma, characterizing this tumor under the head of lymphangio-endothelioma-intra-vasculare malignant.

Endotheliomas have certain distinguishing features that enable us to separate them from other atypical tumors.

The general morphologic characteristics of endothelial tumors as has been outlined by F. Robert Zeits of Chicago, is as follows and coincide with the findings in this case.

(1) The tumor cells in endothelioma are constantly and intimately connected with the stroma, and cannot be brushed out of the stroma, as is the case in carcinoma in which the epithelial cells may also retract from the stroma and show spaces.

(2) Endothelial cells produce intercellular cement substance and are closely packed together, whereas the epithelial cells in carcinoma have no intercellular substance and form no compact layers.

(3) In endothelioma the cell masses consist of a dense mosaic of many layers of cells with small, sharply outlined nuclei, surrounded with a broad envelope of clear glassy perinuclear protoplasm.

Carcinoma cells have large vesicular nuclei, with a moderate amount perinuclear protoplasm, more or less granular.

(4) In endothelioma delicate fibrillar processes extend from the walls of the alveoli into the proliferated endothelial cell masses. These are absent in carcinoma.

(5) In endothelioma the tumors are arranged in the form of cellular cords and cylinders (round masses in the carcinoma), and may separate out hyalin material (cylindroma) or form lumina-like areas (sievè-like) in the cellular cords, due to secretory processes of endothelial cells.

(6) To distinguish the endothelial tumors from sarcomata it is to be remembered that the former have an organoid, the latter a histoid structure. According to this definition every large-cell sarcoma with a well developed stroma, which was formerly called alveolar sarcoma, would be called an endothelioma.

It is also necessary to add that the great length of time that this tumor took to develop (14 years), is also a feature in the diagnosis. There were no metastatic tumors noted at the time of operation. However, we have since been lead to believe they existed, as the patient, though making what apparently seemed a complete recovery, died only a few days ago with what we believe to have been metastatic involvement of the brain. Post-mortem examination denied.

The clinical feature here is of great importance both to the operator and to the patient, as a correct diagnosis gives us the prognosis.

These endothelial tumors do not differ greatly clinically from other malignant growths, except that they are much slower to increase in size and the lymphatics do not become involved till late, the reverse being common in carcinoma.

In conclusion your attention is directed to these points:

(1) Endotheliomas by differing as they do from all other malignant tumors, need be classified as Zeits of Chicago has suggested, to themselves.

(2) They should then be correctly diagnosed as distinct and separate tumors.

(3) The early and correct diagnosis if made before metastasis is produced and neighboring lymph nodes involved is certainly important as cure is then more probable than if the case be either carcinoma or sarcoma.

## PRIMARY LIGATION OF THE INTERNAL ILIAC ARTERIES IN HYSTERECTOMY.

BY N. O. HARRELSON, M. D., KANSAS CITY, MO.

Primary ligation of the internal iliac artery, preferably just above the uterine branch, has the advantages of effectually controlling the hemorrhage and aiding in the isolation of the ureter in a pan-hysterectomy. In young subjects, with far advanced cervical cancer and extensive involvement of the broad ligament, the uncontrolled blood supply often renders a thorough operation impracticable. Operators have frequently been compelled to adopt this method in the face of extreme emergencies, which if employed as an initial and elective step would insure advantages very apparent over the procedure as a *dernier resort* and imperative recourse. The friability of the blood vessels and tissues in many malignant conditions renders them very easily cut and torn by the ligatures, necessitating repeated ligations and undue prolongation of the interference. While it might seem hazardous to cut off the nutrition of the numerous parts supplied by the distribution of this vessel, practical experience proves that the abundant collateral circulation in this region adequately compensates the impaired blood supply.

This method may be successfully used in benign as well as malignant growths. The technique of this operation consists of the regulation abdominal incision with the patient in the extreme Trendelenburg position. The abdominal viscera are crowded up toward the diaphragm and retained in position with hot abdominal pads, leaving the pelvis free. The exact position of the external and internal iliacs is ascertained by simultaneous palpation with the middle and index fingers, just below the bifurcation of the common iliac artery. The location of the ureter is also observed at this time. By the use of blunt scissors a longitudinal incision is made in the peritoneum over the internal iliac artery just below the bifurcation of the common iliac. An aneurism needle armed with medium-sized catgut is passed around the vessel and secured. The vessel of course, is not severed at this point. The peritoneal slit is closed with a continuous suture of fine catgut, which being completed the operator may proceed to extirpate the entire uterus and appendages.

I recently had occasion to employ this method in a case of advanced cervical cancer, with the left broad ligament involved. Immediately upon entering the abdomen and clearing the field, I ligated the internal iliacs as described. In the removal of the uterus the method described by Wertheim, as the German-American operation, was largely adhered to. Within thirty-six hours the temperature and pulse were normal, and the bladder and bowels were regular in their functions, followed by a rapid convalescence.

The chief advantage of this method lies in the fact that it gives the operator absolute control of the field, enabling a more thorough removal of the diseased tissues. It is well to bear in mind that the immediate and remote success of the operation depends more especially upon the prevention of an excessive loss of blood than upon the rapidity of the operator.



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## EDITORIAL.

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### NEW MEDICAL LEGISLATION.

To the members of the Missouri State Medical Association:

It might interest you to learn in advance of the formal report by the Committee on Public Policy and Legislation, what has been accomplished by the profession of this state in securing legislation at the hands of the General Assembly, the regular session of which has but recently adjourned.

Thanks to the efforts of the county medical societies, to whom must be accorded the first credit, and thanks to the influential co-operation of the State Board of Health, the Bills fixing preliminary literary requirements and a four years college curriculum as conditions for admission to the examination for a license to practice, was passed, together with a penal clause bringing those practicing without a license under the jurisdiction of the courts. The standard requirements enacted are the minimum requirements of the American Medical Association.

The organized medical profession of this state was also an important factor in securing the passage of the Pure Food law, which was next in importance of the measures enacted.

The measure relating to criminal abortions which makes the crime a felony instead of a misdemeanor, together with a section whereby it is hoped convictions will be more readily secured for this offense, also received the approval of the General Assembly.

Unfortunately the measure whereby county Boards of Health were to be created and which embodied provisions for the gathering of vital statistics, failed of passage in both houses.

The bill limiting the time for bringing actions for alleged malpractice, was reported unfavorably by the Committee on Jurisprudence.

Members will also be glad to learn that the General Assembly placed at the disposal of the State Board of Health such an appropriation as will enable it to conduct the sanitary affairs of the State in a suitable manner.

The citizens of this commonwealth should consider themselves under many obligations to the medical members of the legislature who were untiring in their efforts to secure necessary legislation.

F. J. LUTZ.

Chairman Committee on Public Policy and Legislation.

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### SEMI-CENTENNIAL.

#### FIFTIETH ANNUAL MEETING MISSOURI STATE MEDICAL ASSOCIATION.

The next meeting of the State Association is the fiftieth annual meeting—the Semi-Centennial. The occasion should call forth the largest attendance in the history of the Association. Although the Society was founded in 1850 and is therefore in reality 58 years old, we count only fifty meetings since there was a lapse of eight years during the Civil War—from 1859 to 1867—when no meetings were held.

The Committee of Arrangements is exerting special efforts to celebrate the occasion in a fitting manner. All living ex-presidents will attend in a body and unite in commemorating the event.

The excellent scientific program promises many papers of unusual interest and the pathologic exhibit will be a source of instruction and benefit to all who attend the meeting. In our next issue we shall announce the completed program and full arrangements for the celebration of the Semi-Centennial Meeting.

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#### THE PATHOLOGICAL AND ANATOMICAL EXHIBIT.

The Pathological Exhibit will be a feature of unique interest at the next annual meeting. The following exhibits have been promised and to these probably others will be added before the meeting takes place:

1. Exhibit from the Anatomical Department of St. Louis University.
2. Exhibit of early human embryos, specimens and models. By C. M. Jackson, M. D., University of Missouri.
3. Exhibit of Pathologic Ophthalmological specimens. From St. Louis College of Physicians and Surgeons.
4. Exhibit of specimens of Hypernephroma. From Jackson County Medical Society.
5. Exhibit of Plant Pathology. By Dr. Herman von Schrenck.
6. Exhibit of selected specimens. From Barnes Medical College.
7. Comprehensive collection of Carcinoma specimens. From

### St. Louis Medical Society.

In addition to the above there will be microscopic demonstrations, lantern slide talks, and a large collection of single specimens of unusual interest.

The address by Dr. Von Schrenck, Consulting Pathologist of the U. S. Department of Agriculture, will be one of rare attractiveness.

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### DR. ALLEE RESIGNS.

Dr. W. S. Allee, Councillor for the Seventeenth District, has tendered his resignation to the Judicial Council. Dr. Frank DeVilbiss, of Eugene, has been elected to fill the vacancy caused by Dr. Allee's resignation. Dr. Allee leaves his district well organized and we feel confident that the members in the Seventeenth District will be pleased with the selection of Dr. DeVilbiss as his successor.

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### PAY YOUR DUES.

County secretaries are urged to make prompt remittance to the State Secretary, of dues for members of local county societies, and send a list of the members for whom dues are paid. All dues should be paid by March 31st. It is necessary that these remittances be made promptly so that a complete roster of membership can be made up and all paid up members placed in good standing before the annual meeting.

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### SECOND EDITION OF THE FRAUD PAMPHLET.

The American Medical Association press has issued a second edition of the fraud pamphlet, containing reprints of all the articles on the Great American Fraud from *Collier's Weekly*. This edition includes the articles on patent medicine, and also the second series of articles by Mr. Adams on Quacks and Quackery. They are the result of a vast amount of personal investigation on the part of Mr. Adams. They clearly and relentlessly expose the ridiculous claims of the quacks and charlatans, who are deluding and duping the public. It is desired to get these pamphlets into the hands of just as many physicians as possible. They are sold in quantities at a nominal figure which barely covers cost. Many county societies have ordered sufficient quantities for distribution to their members. The pamphlets can be secured in any quantity from the American Medical Association Press, 103 Dearborn Ave. Chicago, Ill.

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### SPECIAL TRAIN TO ATLANTIC CITY.

Those who contemplate attending the meeting of the American Medical Association, in Atlantic City, June 4 to 8, are invited to join the Missouri Valley party now being organized.



The special will leave St. Louis June 1. at noon, over the Big Four and C. & O. via Indianapolis and Cincinnati, through the picturesque resort region of the Virginias, stopping at Hot Springs and White Sulphur Springs, and visiting the Jamestown exposition.

This train will be superbly equipped with Pullman parlor sleepers and diners, and will reach Atlantic City Monday morning, thus affording ample time for registering and attending auxiliary meetings before the opening of the A. M. A. on Tuesday.

Special through cars will leave Omaha (via Wabash) St. Joseph and Kansas City (via Mo. Pac.) May 31 (evening) and reservations should be made early. Full information and itinerary obtained by addressing the Secretary, Dr. Chas. Wood Fassett, St. Joseph, Mo.

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### PHYSICIANS' PRESCRIPTIONS AND THE NATIONAL PURE FOOD LAW.

A press dispatch from Washington has the following to say regarding the violation of the National Pure Food Law by physicians: "Physicians whose practice takes them back and forth over State or territorial lines may be surprised to know that each day they are violating, many of them, the Federal pure-food law.

A decision just made by the legal advisors of the Department of Agriculture holds that a physician cannot lawfully send or ship across a State line a package of medicine of his own compounding, unless there is a label on the package bearing the information which is specifically called for by law. He can, however, carry the package across the line himself, without reference whether it is properly labeled, as can also the patient or a member of the patient's household. But the package in the latter instance, must not be subject to sale.

In view of this decision, a physician may carry a package of medicine across a State line if he is traveling on a train, or by any other mode of transportation, without it bearing the pure-food label, but should it be too heavy for him to carry, or should he decide for any other reason to send it by express, even though he is on the same train, the law is violated if it is not labeled. The first transaction is not considered one of interstate commerce.

The same law applies to druggists, compounders and their agents."

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### ALUMNI OF RUSH MEDICAL COLLEGE.

Missouri members of Rush Medical College alumni will meet at a banquet at Jefferson City on Wednesday night, May 15th.

All Rush graduates in Missouri are requested to attend.

## OBITUARY.

Dr. William Drechsler of St. Louis died at his home on February 1st, aged 77 years. Dr. Drechsler was born in Clausthal, Germany, in 1829. He graduated in medicine from the Medical Department of the old St. Louis University (sometimes called Pope's College) in 1853. He was field surgeon in the Union Army during the early part of the Civil War and later was placed in charge of McDowell's Medical College building which was used as a war prison by the Government.

Besides his wife and two daughters he is survived by his son, Dr. Louis Drechsler, of St. Louis.

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## DR. W. C. GLASGOW.

Dr. William Cass Glasgow, one of the older physicians of St. Louis, died suddenly on March 22nd. Dr. Glasgow was a St. Louisian by birth and education, though he graduated in medicine at the University of Vienna as well as at the St. Louis Medical College. He had held the chairs of clinical medicine and laryngology at Washington University, and had also been consulting physician to the City Hospital and the Martha Parsons Hospital for children. He was an ex-president of the American Laryngological Society. Dr. Glasgow was in his sixty-third year, having been born in January, 1845. He leaves a widow, four sons, and one daughter.

Next Annual Meeting, Jefferson City, May 14, 15, 16, 1907.

### PRELIMINARY PROGRAM.

- W. S. Allee, M. D..... Olean  
 "Duty of the Practitioner in Tuberculosis."
- J. M. Allen, M. D..... Liberty  
 "Tuberculosis a Communicable Disease."
- James Moores Ball, M. D..... St. Louis  
 "The Surgical Treatment of Glaucoma"
- Willard Bartlett, M. D..... St. Louis  
 "Personal Experiences in the Removal of Ureteral Calculi"
- Robert Barclay, M. D..... St. Louis  
 "Relief of Obstinate Deafness of Chronic Middle Ear Disease."
- W. M. Bayliss, M. D..... Columbia  
 "The State Sanitarium."
- G. A. Beedle, M. D..... Kansas City  
 "Carcinoma of the Breast."
- T. L. Bradley, M. D..... Warrensburg  
 "Let Us Get Closer to the People."
- O. H. Brown, M. D..... St. Louis  
 "Treatment of Pneumonia."
- J. D. Brummall, M. D..... Salisbury  
 "Let Us Get Closer to the People."
- J. Robert Buchanan, M. D..... Nevada  
 "Some Reflections Concerning the General Practitioner."
- A. B. Burgwin, M. D..... Fayette  
 "The Duty of the Examining Surgeon for Life Insurance Companies."
- R. D. Carman, M. D..... St. Louis  
 "The Value of the Roentgen Rays in the Diagnosis of Renal and Ureteral Calculi."
- W. H. Coffey, M. D..... Kansas City  
 "Congenital Malformation of the Rectum; Report of Cases."
- H. S. Crawford, M. D..... Harrisonville  
 "Attitude of the Public Toward the Doctor."
- R. O. Cross, M. D..... Kansas City  
 "Consumption and Civilization."
- L. J. Dandurant, M. D..... St. Joseph  
 "Large Aneurysm in Scarpa's Triangle: Conditions of Patient Eighteen Months After Ligature of Femoral Artery."
- W. B. Deffenbaugh, M. D..... St. Joseph  
 Title not announced.
- H. E. Derwent, M. D..... Clinton  
 "The Eye and the Nervous System."
- F. Devilbiss, M. D..... Spring Garden  
 "Local Medical Organization."
- Walter B. Dorsett, M. D..... St. Louis  
 Title not announced.
- T. H. Doyle, M. D..... St. Louis  
 "Have We Any Infallible Signs, Symptoms or Methods by Which We Can Diagnose Typhoid Fever Earlier Than the End of the First Week?"
- H. E. Dunlop, M. D..... Canton  
 "Medical Education; Preliminary and Professional."  
 Uterine Fibroids.



- Wm. Frick, M. D. .... Kansas City  
 "Some Forms of Scabies Seen in Private Practice."
- F. W. Froeling, M. D. .... Kansas City  
 "Blood Pressure and its Relation to Disease."
- C. A. Good, M. D. .... St. Joseph  
 "Pulmonary Hemorrhage"
- C. E. Fulton, M. D. .... Springfield  
 "The Surgical Treatment of Enlarged Prostate."
- C. G. Geiger, M. D. .... St. Joseph  
 "Inguinal Hernia."
- O. G. Gleaves, M. D. .... St. Joseph  
 "The Neglected Side of the Profession."
- John Green, Jr., M. D. .... St. Louis  
 "A Plea for the Cross-Eyed Child."
- R. H. Goodier, M. D. .... Hannibal  
 Title not announced.
- C. B. Hardin, M. D. .... Kansas City  
 "What We Have and What We Should Have of Medical Law Governing the Practice of Medicine."
- R. D. Haire, M. D. .... Clinton  
 "Local Anesthesia."
- James Hanks, M. D. .... Brashear  
 "Autointoxication."
- Geo. Homan, M. D. .... St. Louis  
 "Sanitation and Tuberculosis."
- W. U. Kennedy, M. D. .... St. Louis  
 "Cholecystectomy vs. Cholecystotomy."
- C. C. Leeper, M. D. .... Braymer  
 Title not announced.
- P. I. Leonard, M. D. .... St. Joseph  
 "The Tonsillar Ring as an Etiological Factor in Diseases of the Ear, Nose and Throat."
- T. F. Lockwood, M. D. .... Bulter  
 "Medical Scraps."
- J. C. Mathews, M. D. .... Springfield  
 "The Art of Prescribing."
- A. H. Meisenbach, M. D. .... St. Louis  
 "A Protest Against the Use of Taxis in Strangulated Hernia."
- W. J. McGill, M. D. .... St. Joseph  
 "Stricture of the Rectum."
- Herman E. Pearse, M. D. .... Kansas City  
 "Report of a Case of Aneurysm of the Subclavian; Ligature in the First Portion; Recovery."
- T. E. Potter, M. D. .... St. Joseph  
 "The Omentum as a Surgical Factor."
- William Porter, M. D. .... St. Louis  
 "Civic Responsibilities."
- John Punton, M. D. .... Kansas City  
 "A Plea for the State Care of Nervous Individuals."
- Francis Reder, M. D. .... St. Louis  
 "Malignant Disease of the Rectum."
- S. H. Redmon, M. D. .... Tipton  
 "Milk."
- Louis T. Riesmeyer, M. D. .... St. Louis  
 "The Effect of Surgical Operation on Diabetic Patients."

C. F. Roberts, M. D.	Kansas City
"A Few Points Relative to Prostatectomy."	
J. D. Seba, M. D.	Bland
"Tubercular Peritonitis."	
J. N. Scott, M. D.	Kansas City
"Present States of X-Ray Treatment of Malignant Growths."	
Jas W. Smith, M. D.	Richmond.
Title not announced.	
L. A. Todd, M. D.	St. Joseph
"Post-Operative Accidents and Sequela."	
L. M. Warfield, M. D.	St. Louis
"Early Diagnosis of Tuberculosis."	
R. Winn, M. D.	Ilasco
Title not announced.	

## DELEGATES.

COUNTY.	NAME	ADDRESS
Adair	Jas. Hanks.	Brashear
Andrew	E. C. Bennett.	Bolckow.
Barton	T. H. Duckett.	Milford.
Bates	T. C. Boulware.	Butler.
Benton	M. Dillon	Fairfield.
Boone	Woodson Moss.	Columbia.
Caldwell	W. L. Lindley.	Hamilton.
Callaway.	J. E. Harrison.	Fulton.
Cape Girardeau	G. W. Vineyard.	Jackson.
Cass	J. S. Triplett.	Harrisonville
Cedar	R. O. Crawford.	Eldorado Springs
Chariton	Oliver McEwen	Shannondale.
Clay	H. Rowell	Kearney.
Clinton	J. A. Franklin.	Cameron.
Cole	J. L. Thorpe.	Jefferson City.
Cooper	R. L. Evans.	Boonville.
Daviess	H. E. Songer.	Jamesport.
DeKalb	(Not yet elected)	
Gasconade-Maries-Osage	J. J. Ferrell.	Owensville.
Grundy	J. A. Asher.	Trenton.
Henry	J. R. Hampton.	Clinton Ford.
Holt	C. L. Evans.	Oregon.
Howard	C. O. Lewis.	Fayette
Howell	J. W. Gingham.	Potterville.
Jackson	F. E. Murphy.	Kansas City.
	J. M. Frankenburger.	Kansas City.
	R. T. Sloan.	Kansas City.
	Eugene Carbaugh.	Kansas City.
	J. L. Kanoky.	Kansas City.
	A. H. Cordier.	Kansas City.
	N. P. Wood.	Independence
Johnson	L. F. Murray.	Holden
Knox	R. A. Wilsey.	Hurdland.
Lafayette	W. A. Braecklein.	Higginsville.
Lawrence-Stone	C. A. Moore.	Aurora.
Lewis	H. E. Dunlap.	Canton.
Linn	J. P. Oven.	Brookfield.

Marion .....	Thos. Chowning.....	Hannibal.
Mississippi .....	A. W. Chapman.....	Charleston.
Moniteau .....	W. R. Patterson.....	Tipton.
Newton .....	R. C. Lamson .....	Neosho.
Nodaway .....	F. R. Anthony.....	Maryville.
Phelps .....	F. L. Baysinger.....	Rolla.
Pike .....	D. M. Pearson.....	Louisiana.
Platte .....	S. Redman.....	Platte City.
Putnam .....	J. A. Townsend .....	Unionville.
Ralls .....	W. T. Waters.....	New London.
Ray .....	R. L. Hamilton.....	Richmond.
Schuyler .....	J. D. Bridges.....	Downing.
Scott .....	(Not yet elected).....	
Shannon .....	P. D. Gum.....	Birchtree.
St. Francois .....	F. L. Keith.....	Flat River.
St. Genevieve .....	(Not yet elected).....	
St. Louis .....	W. H. Townsend.....	Maplewood.
	Paul Y. Tupper.....	St. Louis.
	J. C. Morfit.....	St. Louis.
	Jesse S. Myer.....	St. Louis.
	Wm. W. Graves.....	St. Louis.
St. Louis City.....	John Green, Jr.....	St. Louis.
	W. H. Stauffer .....	St. Louis.
	W. H. Clopton.....	St. Louis.
	F. L. Henderson.....	St. Louis.
	H. W. Soper.....	St. Louis.
Warren .....	(Not yet elected).....	
Worth .....	W. E. McKinley.....	Denver.

The above represents the list of Delegates reported to date of going to press. We urge those Counties not represented in the above list to elect their delegates as soon as possible and forward the name and address of the delegate to the State Secretary.



## COUNTY SOCIETY NOTES

### ADAIR COUNTY MEDICAL SOCIETY.

The Adair County Medical Society met in Kirksville March 7th, 1907. Six members were present. Dr. Jurgens was unable to attend but sent his paper entitled "What is it That Makes So Many Physicians Poor Practitioners." It was thoroughly prepared and discussed.

The next meeting will be April 4, 1907.—E. C. GRIM, Secretary.

### ANDREW COUNTY MEDICAL SOCIETY.

Dr. W. T. Elam, Councilor of the Seventh District, visited Savannah on March 26th, and reorganized the Andrew County Medical Society, with an enrollment of fifteen members. Officers were elected as follows: President, Dr. E. C. Bennett, Bolckow; vice-presidents, Drs. Jno. Hoshier, Rosendale; S. S. Bever, Amazonia; E. H. Carpenter, Helena; W. C. Myers, Savannah; secretary and treasurer, Dr. C. O. Jeffries, Savannah; delegate, Dr. E. C. Bennett; alternate, Dr. D. B. Bryant. The next meeting will be held in Savannah on April 23d, when a number of additional members will be added to the roll.

### CASS COUNTY MEDICAL SOCIETY.

March 7th was our regular meeting day and with one exception probably the largest number attended since our organization. Every one on the program was ready with a paper worthy the time and efforts of any set of medical men in Missouri.

F. B. Ellis of Garden City read a splendid paper on "Phases of Eye Work Essential to the General Practician."

M. P. Overholser handled "The Circulatory System" in an elementary manner taking us back to college days and much refreshing our memories concerning the relationship between blood pressure, heart muscle and the vaso-motor nerves.

D. W. Conger of Harrisonville presented the medico-legal side of the question of "Cæsarean Section versus Craniotomy." Although being the second year of the Doctor's practice in the profession he showed an able handling of this subject much to his credit and the delight of his older colleagues.

H. S. Crawford was well pleased at the reception given his paper entitled, "Attitude of the Public Toward the Doctor." He feels grateful to the society for the valuable pointers given in the discussion. Dr. Crawford will represent Cass County at Jefferson City May 14th, 15th and 16th.

Those entering into the discussions were Doctors G. M. Anderson, D. W. Conger, W. F. Chaffin, H. S. Crawford, F. B. Ellis A. R. Elder, H. Jerard, G. W. Farrow, Mart Hammond, M. P. Overholser and J. S. Triplett.

The Society voted to hold its next meeting in Pleasant Hill. May 2, 1907.—W. F. CHAFFIN, Reporter.

## GREENE COUNTY MEDICAL SOCIETY.

### MEETING OF FEBRUARY 22ND.

Doctors A. Armstrong, F. B. Fuson, N. C. Williams, A. F. Willier of Springfield and E. E. Evans of Bois Daro, Mo., were elected to membership in the society. Dr. Matthews made an interesting talk on what the Committee on Public Health and Legislation could do; a general discussion ensued and each member was asked to gather all the evidence he could about illegal practitioners of medicine and turn it over to this committee. The society voted to hold an open session and a committee was appointed to arrange for this.

Dr. N. F. Terry read a paper on the "Relation of Pelvic Diseases to Insanity." He said in part: "It is a fact that intimate relations exist between the pelvic organs and certain mental conditions, but we will only consider those in which definite organic disease exists in the pelvic organs. Here as in other diseased conditions it affects the brain only as it causes faulty nutrition thereby causing cerebral anemia which may cause the insanity. The most important literature on this subject has been written within the last 40 years and does not usually advise operations unless a known pathological condition effecting the general health exists; early operations produce the best results but the surgical treatment of insane women is too much in its infancy to permit the drawing of conclusions; still we may say that a large per cent. of insane women have pelvic diseases which in some instances affect the general health and thus contribute to the mental condition. Insane women bear surgical operations well without making their insanity worse and in most instances their diseases are neglected. In these cases the general practitioner must make an early diagnosis and remedy the trouble to obtain the best results."

### MEETING OF MARCH 8TH.

The Committee on Open Session decided on April 26th for the date of the meeting and to have a paper on "Hygiene in the Public Schools" by some educator or teacher; and one on "Public Sanitation" by some member of the Society. Discussions to be limited.

Dr. E. L. Evans read a paper on "Diphtheria and its Treatment." He said in part:

"Diphtheria has prevailed since about 460 B. C. The oldest recorded description of it was about A. D. 100. Bretonneau, of France, named it in 1881; the bacillus was described in 1883-4. The

disease is due to the presence of the Klebs-Loeffler bacillus, is first local and then systemic; it occurs at any age and may occur more than once in the same patient; the time from exposure to first symptoms may be from 24 hours to 12 days; the symptoms vary greatly from a slight indisposition to the gravest of symptoms; the parents usually first notice a slight laryngeal obstruction, the pulse is usually rapid, the temperature is not usually high unless there are complications, the differential diagnosis is not usually hard to make owing to the characteristic membrane in diphtheria; albumen is nearly always present. Antitoxin serum was first used in 1893 and its use has reduced the mortality about fifty per cent.; this shows that it is a lack of knowledge not to use it when it can be obtained. It only neutralizes the toxine and supporting treatment must be added to proper nutrition. Keep the patient quiet and allow plenty of fresh air, cleanliness and sunshine. If the attack is severe stimulants are necessary and good brandy is the best.

In medical treatment he inclined to the germicidal and eliminative measures as calomel benzoate of sodium and peroxide of hydrogen, the sodium in 15 grain doses, the peroxide of hydrogen full strength applied often with a swab; antitoxin should be given early and liberally; a few large doses in the onset is almost certain to arrest the disease and in nasal and laryngeal diphtheria particularly large doses. Exposed persons should receive a moderate dose, at least 1,000 units.

He believed in giving 4,000 units at first and repeat in 3 or 4 hours according to the severity of the case as the effect soon wears off, but if the case is very malignant, or laryngeal, and seen late, he would give 6,000 to 8,000 units at the first dose and repeat every 2 to 4 hours according to the results produced.

In the discussion Dr. Fulton spoke about the prophylactic treatment and that the germ stays in the throat for quite a while. Dr. Hill spoke of how localities and seasons effect the disease and advised strychnine as a stimulant. Doctors Woody, Smith, Farnsworth and Pursselly also discussed the paper.—O. L. ORMSBEE, Secretary.

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### HENRY COUNTY MEDICAL SOCIETY.

The regular session was held at Clinton on March 13th. Dr. W. M. Shankland read the history of a case of injury to left leg with attending pain of right leg and foot, phlebitis supervening in both legs.

Dr. R. D. Haire related the case of a school boy, 10 years old, who in play was thrown down, other boys falling on him. The patient attended school for about two weeks afterwards when pain in the thigh came on without other known cause, in time of school, and was so severe that he had to be carried home. Pain located in mid-



dle third of thigh, some at the knee; extending limb by the hands gave some relief.

Dr. J. H. Britts reported that the Hospital Committee had not come to any definite conclusion and on motion of Dr. Russell was given more time.

The officers elected at the December meeting were B. B. Barr, president; J. G. Beaty, vice president; F. M. Douglass, secretary and treasurer; J. R. Hampton, delegate.—F. M. DOUGLASS, Reporter.

#### HOWARD COUNTY MEDICAL SOCIETY.

The regular meeting held at Fayette on March 1st was not as largely attended as usual owing to bad weather. However seven members were present.

Dr. Richard presented a case of gonorrhoea in a girl four years of age. The hymen had been torn and the parts were otherwise lacerated. Dr. Richard also presented a case of specific iritis in a child.

Dr. Watts presented a case of diabetes.

On motion the Chair appointed a Committee to arrange for the entertainment of invited guests of the society at the public meeting to be held on April 5th, consisting of the following members: Doctors Richards, Meyer and Smith. On motion the chairman was made a member of this Committee.—C. W. WATTS, Secretary.

#### JOHNSON COUNTY MEDICAL SOCIETY.

The regular session met at Warrensburg March 12th, 1907, and the regular business was transacted as usual. Four applications recommended by the Board of Censors were approved and the applicants elected:—Doctors Simpson of Holden, Zoll of Warrensburg, Geo. W. Adams, Fayetteville and Pare of Luton.

The Society decided to hold their annual banquet on or near the date of next regular meeting of the society and directed the executive committee to prepare for same on the lines as last year.

The scientific program consisted of two excellent papers; one by Dr. E. A. Graves of Kingsville, Mo., on the "Treatment of Lobar Pneumonia;" the other on "Some Pathological Conditions Found in Diseased Accessory Nasal Sinuses."

These papers were discussed freely by nearly all members present, bringing out a variety of opinions and experiences which held much of instruction and edification for the members.—E. H. GILBERT, Reporter.

#### NODAWAY COUNTY MEDICAL SOCIETY.

The regular monthly meeting was held at Maryville on March 12th. A large number of members were present and the following visitors:—Doctors C. H. Wallace, T. E. Potter, O. B. Campbell, W. T.

Elam, Jacob Geiger, C. W. Fassett, P. I. Leonard, St. Joseph, D. J. Hunterson, Parnell, F. M. Martin, Maryville, C. W. Kirk, Hopkins, and Wm. Wallis, Jr., Maryville. The following interesting program was carried out:—

Medical Organization.....Dr. Chas Wood Fassett, St. Joseph  
 Medical Organization..Dr. W. T. Elam, District Councilor, St. Louis  
 Specialism.....Dr. P. I. Leonard, St. Joseph  
 The Omentum as a Surgical Factor.....Dr. T. E. Potter, St. Joseph  
 Fractures of the Upper End of the Femur.....Dr. Jacob Geiger,  
 St. Joseph.

The Early Recognition of Cancer of the Uterus

.....Dr. O. B. Campbell, St. Joseph

The papers by the visiting physicians from St. Joseph were of great interest to the members and brought out a full discussion.

The following new members were elected:—Doctors M. Carter, Burlington Junction; F. M. Martin, Maryville; C. G. Dean and M. A. Gaugh of Burlington Junction; F. A. Lee, Skidmore; C. W. Kirk, Hopkins.—H. L. SAYLOR, Secretary.

#### RAY COUNTY MEDICAL SOCIETY.

The Ray County Medical Society held its regular meeting on January 17th at Richmond.

Dr. H. S. Major read a paper on "Cerebro-spinal Meningitis."

Dr. R. L. Hamilton was elected delegate to the annual meeting at Jefferson City. Dr. Jas. W. Smith was appointed to read a paper before the State Association.—C. C. CROWLEY, Secretary.

#### STODDARD COUNTY MEDICAL SOCIETY.

The regular bi-monthly meeting was held at Bloomfield on March 6th. The morning session was devoted to miscellaneous business, after which the members adjourned to the Barrett Hotel where the local members had prepared for the entertainment of the members and guests.

##### AFTERNOON SESSION.

At 2 p. m. the Society reconvened.

Doctors Allen and Wingo reported a very interesting case of bone resection in a compound comminuted fracture of the tibia that had become infected from lack of proper care of the initial wound. Dr. T. C. Allen reported two cases of thrombosis.

H. S. Shaw, Esq., prepared a paper with the title "The Doctor as a Witness," but as he was unable to attend the meeting, his paper was read by Dr. Ed. Moore. The discussion following the reading of this paper was very interesting, and brought out many valuable points.

A symposium on "Alkaloidal Medication" was presented by Doctors Ashley and Vernon. The points brought out in the discus-

sion were:—That alkaloidal medication is not an ism, pathy, exclusive system, a specialty, or dogma, but simply carrying out what was begun in 1816-1820, when morphine, strychnine, brucine and quinine, were isolated and their use begun, instead of opium, nuxvomica, and cinchona bark; neither are these agents advocated to be used to the exclusion of other established remedies. They are deserving of more careful study and clinical use than has been given them, but not to the exclusion of any other good and proven remedy.

The next meeting of the Society will be held at Advance the first Wednesday in May.—Geo W. VERNON, Reporter.

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### ST. LOUIS COUNTY MEDICAL SOCIETY.

The St. Louis County Medical Society met March 13th at Kirkwood with fifteen members present.

Dr. C. A. Dunnivant reported a case of persistent sciatica, which had not improved under usual therapy.

Dr. H. G. Wyer reported a case of sciatica of five years' duration, all forms of treatment unsuccessful, electricity seemed to aid slightly. He also reported a case of appendicitis with unusual symptoms considering the pathological condition found at operation. Specimen of appendix with adherent omental mass was presented.

Dr. N. E. Metcalfe read an interesting paper "The Digitalis Group."

Dr. P. M. Brossard read a fine paper, entitled "Rheumatoid Conditions." These papers were ably discussed.

The program promised for April is as follows:

1. The Modern View of Immunity, by R. D. Moore.
2. The Present State of Serum Therapy, by R. C. Forsyth.

Doctors R. Bracy, of Wellston, and Charles Zuppann, of Ballwin, were elected to membership.—R. D. MOORE, Reporter.

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## BOOK REVIEWS

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PSYCHOLOGY APPLIED TO MEDICINE. Introductory studies by David W. Wells, M. D. Lecturer on Mental Physiology, and Assistant in Ophthalmology, Boston University Medical School; Ophthalmic Surgeon, Massachusetts Homeopathic Hospital, Boston; Oculist, Newton (Mass.) Hospital. Illustrated, nearly 200 pages, with Bibliography and Index. 12mo. Extra Quality Paper. Neatly Bound in Cloth. Price, \$1.50 Net. F. A. Davis Co., Publishers, 1914 Cherry St., Philadelphia, Pa.

The present essay has developed as a result of several years' lecturing to medical students, and is based on a practical knowledge of their needs.

The leading features of the book are:—1. A clear statement of the important facts of medical psychology. This material occupies the first few chapters. 2. Hypnotism (its history, methods of induction, and theories concerning it) is treated in three chapters. This is a valuable resume of the present status of the subject, together with the account of considerable original experimentation. Its value and place in the practice of medicine are carefully considered. 3. Mental healing in its many forms occupies the three remaining chapters. An attempt is made to find the underlying therapeutic principle, which is so generally obscured by the false notions and extravagant claims of the various sects. The book concludes with a critical examination of the prevalence of a psychic element in all forms of modern medical methods.

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OPERATIVE GYNECOLOGY. By Howard A. Kelly. Professor of Gynecological Surgery in the Johns Hopkins University, and Gynecologist to the Johns Hopkins Hospital, etc, etc. With 11 plates and 703 original illustrations for the most part by Max Broedel. Second revised and enlarged edition in two volumes. New York. D. Appleton and Co. 1906.

It is now nine years since the first edition of this excellent work has appeared and it seemed necessary to undertake such a revision as will satisfactorily present certain important changes in the field of surgery. Thus many improvements are notable, especially in the first volume. For the benefit of the general practitioner new chapters have been added dealing with local and palliative treatment, with the use of the pessary, with menstruation and its anomalies and other subjects of practical importance. Dr. Geo. Gellhorn of St. Louis has supplied a chapter on the Diseases of the Hymen. As a whole this, probably the most popular textbook on gynecology, in its new appearance very creditably reflects the present status of the practice of gynecology in this country.

# JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

Volume III

MAY, 1907

Number 11

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## ORIGINAL ARTICLES

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### MEDICAL REFORMATION.\*

BY J. S. TRIPLETT, M. D., HARRISONVILLE, MO.

After reorganization reformation.

When the A. M. A. instituted the present plan of reorganizing the medical profession of America, six years ago, it contemplated much more than mere organization. This was to be a first step or preparation by means of which it would be enabled to accomplish the high ideals for which the medical profession stands, viz.: the advancement of medical science; alleviating the sufferings of humanity; limiting and controlling the spread of disease; prolonging human life; protecting the unsuspecting public against charlatans, quacks, illegal practitioners and that greatest monster of them all, the nostrum evil.

Reorganization may be likened to the building and perfecting of an intricate mechanical construction, and reformation to the product of such a machine. Without the one we can never hope to materialize the other.

We are all more or less familiar with the progress and present condition of reorganization. We have witnessed how the membership of our State Association has increased from an annual average of about 250 for a few years prior to 1900, to over 2000 at the present writing; how our own Society of Cass County, which was represented in the State Association by an annual average of not more than 4, to a membership of 30 at this time.

Notwithstanding the fact that reorganization is in only its formative period, its objects and purposes not yet fully comprehended by all physicians, yet confidence in its principles is so firmly fixed that its possibilities for effecting reforms are most flattering.

There has been a great public awakening to the necessity of stamping out everything that savors of dishonesty and fraud and as a natural sequence a great reform wave, whose counterpart has, perhaps, never been known, is sweeping over our country. I cannot doubt but that this awakening of the public conscience to the many evils which are corrupting and disgracing our country, will result in many needed reforms. The time is ripe for action.

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\*Prepared for the Annual Meeting, Jefferson City, May, 1906.

Not only in matters medical, but in politics, in federal, state and municipal government, and in the great commercial enterprises, frauds, corruption and moral turpitude are being unearthed and exposed to public view. The work of exposing these evils is being done by some of the most influential, talented and courageous men of our day.

The time was, and that not far back in the past, when the eminent and much sought after physician and surgeon did not have the time or inclination to take up arms against the evils which are menacing the health and liberty of our people.

Not so today: for among those who are sacrificing time and energy in the interest of medical reforms are numbered some of our most eminent teachers, our highest authorities in medicine, our most skilled surgeons and specialists, not to mention the vast army of intelligent and loyal practitioners who have been awakened to a sense of duty, and who are doing yeoman service.

Convincing evidence of the earnestness of the reform movement is shown by the increased amount of reform literature which has appeared within the last two years. I doubt not that the reform literature of this period exceeds in amount that of the same class for the entire previous decade.

It is very true that "we must educate the people"; but before we qualify as teachers we must first educate the medical profession. In other words, if we would reform others, we must first reform ourselves. Had the medical profession recognized this truth years ago its influence would be much greater than it is today. I would therefore place the physician at the head of the list as most in need of reform.

Many of our laws regulating the practice of medicine and other medical matters need changing; others need to be repealed and better ones enacted. There are too many medical colleges; and the matriculation and degree requirements are too low in many of them. Reciprocity among the several states and territories is needed. Charlatanism, quackery, and the nostrum evil ought to be completely stamped out.

Believing that it will devolve for the most part, upon the medical profession to conduct these reform movements, I will endeavor to point out a line of procedure which in my mind is feasible. In doing this I will confine my remarks to a consideration of the physician in his relation and duty to: 1st. Scientific Medicine. 2nd. His Fellow Practitioner. 3rd. The Public. 4th. His Literature. 5th. The County Society.

1. *Scientific Medicine.* To promote the advancement of scientific medicine should be his first duty. He must be imbued with that lofty professional spirit which gratuitously bestows upon mankind the rewards of his labor. If he discovers the specific cause of disease or a new and important symptom he publishes it to the world. If he



discovers or produces a life-saving remedy he gives it to the world. If he invents or improves an instrument or device the world may have it.

While scientific medicine taken as a whole, has advanced *pari passu* with the other sciences, arts and industries, I am sorry to confess that one of its branches, viz., therapeutics, has been sadly neglected and abused.

The deplorable condition in which we find therapeutics is due to the pernicious habit physicians have allowed themselves to fall into of prescribing proprietary remedies for all diseases. This is so very easy to do. It requires no mental exertion. In many of these the physician does not even know its composition. He is told that a certain proprietary is indicated in certain conditions, in this and in that disease.

And why should the doctor consume his valuable time in looking up the action and dosage of official remedies when the wily promoters of these "ethical" proprietaries have relieved him of this responsibility by supplying a remedy accompanied with all necessary information?

Dr. J. A. Pettit (*Journal A. M. A.*, Vol. xlv, p. 484) has so ably pointed out the cause of prescribing proprietaries that I quote him. He says: "Doctors are only American people, and a scanty, hastily acquired medical education still leaves them Americans, of whom a good judge of human nature once said, 'They love to be duped.' Their thoughtlessness and lack of therapeutic knowledge make them ready victims for the shrewd and persistent advertising of the master of that wily art, the nostrum man." . . . The deplorable condition referred to is brought about in the first place through the agency of the subsidized medical press, which gives up not only its advertising pages, but half its reading matter for the love of gold, and publishes what the editors must know is false and fakish; by means of attractive literature and alluring testimonials; through the agency of suave detail men with samples and urgent requests to try "our products;"—each bunch of samples covering the necessities of most all diseases. . . . The doctors, too, are at fault; their ignorance of pharmacy and prescription writing is the crux of the matter—we might say their judgment and discernment are deficient.

The blame for this may be laid to deficient teaching of therapeutics in the medical colleges. . . . "The mental apathy of the average physician along therapeutic lines, his lack of discernment and blind faith in the assertions of commercial firms who have something to sell are some of the greatest causes."

The fate of therapeutics will depend entirely upon the will of the profession. If we study our cases diligently and prescribe intelligently an official drug or preparation with whose action and dosage we are familiar, we can soon place therapeutics upon a firm and rational scientific basis, where it deserves to be. Or, if we continue to

blindly prescribe proprietaries, the composition of many of which we are ignorant, for the diseases in which their promoters claim such wonderful "specific" and "selective" action, the art and science of therapeutics, as such, will finally be lost to our profession. Which course will we pursue?

Many of us have apparently forgotten that our Pharmacopeias, Dispensatories and the many excellent works on *Materia Medica* and Pharmacology contain the same drugs that enter into the composition of proprietaries and nostrums. Then what excuse can we have for prescribing the latter?

In the interest of scientific medicine, I beg each of you to do your full duty in reclaiming and elevating the art and science of therapeutics.

2. *Fellow Practitioners.* Since reorganization has been in operation physicians have had better opportunities to judge each others merits and demerits, and as might be expected, a kindlier and more tolerant feeling prevails among them than formerly did.

There are yet a few physicians among us who consider it unethical and beneath their dignity to consult with those who adhere to a different system or school of practice. I am convinced that this attitude is not in accordance with the principles and ultimate objects of reorganization: for, are we not striving toward a unification of all system into one grand system or school which shall include the sum total of all human knowledge?

I think we violate no principle of ethics in consulting with any physician, of whatsoever school, who is in honest possession of a certificate issued by our State Licensing Board. I do not wish to be understood, however, as recognizing professionally the professors and followers of such institutions as osteopathy, christian science, eddyism, magnetic healing, etc.

A few instances have been brought to my notice in which unethical conduct was charged to a fellow practitioner, which upon being investigated, was found to be, not a breach of ethics, but jealousy on the part of the complainer. So it often is that ethics must bear the brunt of calumny.

Upon the subject of our fellow practitioner I quote a valuable suggestion from the *Journal A. M. A.*: "If the energy that is being wasted by physicians in attacking, belittling, slandering and fighting one another were devoted to work and association in work, we should have a vastly better educated profession, and the public would receive its medical attention from gentlemen very much better qualified to give it." . . . . And they would all be better off financially. . . . . Where one finds a small city or town in which the medical men are devoting their superfluous energies to belittling each other, there, as a rule, one finds a community with the medical men below the average in ability, and in financial standing; patients are being referred to

some surgeon or specialist in the nearest large city, instead of being attended by some local man who is quite as good as the city specialist, or might be if he would devote his energies to his own betterment and work in harmony with his fellows."

3. *The Public.* When the public is convinced that the medical profession is being organized for the sole purpose of giving it better medical service, and for protecting it against illegal practitioners, charlatans, quacks and the nostrum evil, and not in the sense of a trust to increase the resources of physicians, we can depend upon it for its cooperation.

This will be a difficult thing to do so long as we have a subsidized press; for the public cannot distinguish between true and false (commercial) medical teaching and literature. And the Proprietary Association of America will see to it that the public is abundantly supplied with the latter.

Much credit and praise is due *Collier's Weekly*, *The Ladies Home Journal* and other high class lay publications for the great work they are doing in exposing the nostrum evil. Then let *us*, whose duty it is to enlighten the public, not prove recreant to the great responsibilities which devolve upon us as members of a noble and learned profession.

4. *Literature.* In a large measure a physician's character, reputation and his methods of practice are influenced, or I might better say governed, by the literature which he reads. If you know the class of literature he reads you know to what class of physicians he belongs.

Not long ago I called upon a physician whose office was in a dingy back room over a——store. After greeting him I noticed lying upon his table a copy of the *Medical*——, one of the trashiest, most worthless and lowest class medical publications it has ever been my lot to examine. It is controlled by and published in the interest of some of the vilest proprietaries that ever come to the notice of physicians. Taking it up I said: "Doctor, I see you take the *Medical*——" "O, yes, I couldn't get along without it," was his reply. This doctor has been a practitioner for many years; he does not belong to a county society and cannot be induced to join. Do you know to what class of physicians he belongs?

Every self respecting physician should look upon with suspicion and shun all publications which are owned or controlled by the manufacturers of proprietaries and nostrums. They are not sent out in the interest of scientific medicine, notwithstanding their assertions to the contrary.

Perhaps there is not a physician in the United States though not a subscriber, who does not at frequent intervals receive these publications as sample copies or marked numbers. They are thus adroitly thrust upon us whether we will or not, with their wares, and the indis-



criminating physician falls into the trap, thereby creating the necessary fund and profit for their continued existence.

While the low class, unworthy and commercial medical publications greatly out-number the truly scientific and respected ones, physicians will have no difficulty in obtaining a sufficiency of the latter to meet all their requirements.

The ideal medical journal would be one which stands for the highest attainments in scientific medicine; controlled by and published in the interest of the medical profession; fights its battles and upholds its honor; fearless and relentless in exposing and throwing the searchlight of truth upon the frauds, deceptions and evils which beset the profession and the public.

5. *The County Society.* The County Society being the unit of organization, the foundation of, and the door to everything above it, we must need consider it the logical factor by and through whose aid reforms may, and can be accomplished.

The first essential for effective work is an active and harmoniously working society with which every reputable physician in the county should be affiliated. There are very few physicians who are so dead morally and professionally, but that with the association and friendly counsel of the society, may be made to see the errors of their way and be reformed. Even should society influence fail to reform a physician it is none the worse for the efforts put forth in his behalf. The county society, under the new plan of organization, is an institution created for the express purpose of doing things.

Then as a society, but more especially as individuals, beside the scientific part of our work, let us inform our congressmen and our state legislators as to what laws should be enacted for the profession and for the public good: let us prosecute quacks, charlatans, and illegal practitioners so determinedly that their days among us will be few and full of trouble: let us point out to the press the great injury it is doing the public by being a party to the nostrum traffic: let us shun those so-called medical journals which are sent to us in the interest of proprietaries, and finally, let us counsel with the judge, the lawyer, the statesman, the clergyman, the politician and the layman, upon all questions in which medical matters of whatsoever nature, are to be considered.

## NINETY-ONE CASES OF TYPHOID FEVER IN PRIVATE PRACTICE WITHOUT A DEATH: A CLINICAL STUDY.

BY WILLIAM H. HAYS, M. D., HANNIBAL, MISSOURI.

In a well-ordered, modern hospital, with a corps of efficient trained nurses, resident house physicians, every modern facility for the preparation of the dietary and the application of the most modern methods of hydrotherapy, the care of typhoid fever patients resolves itself into a comparatively simple task.

In private practice, where the physician has no such aids to reinforce his efforts, where there are comparatively few trained nurses, where the patients must be treated in their own homes, subject to the irregular nursing and medication, and where it is exceedingly difficult for the orders of the attending physician to be enforced, the treatment of typhoid fever is an entirely different proposition.

During the years 1903-4-5-6, I have treated ninety-one cases of typhoid fever without a death and with but two relapses; this without any of the benefits of hospital treatment, except in one case. This is an experience sufficiently unique, I think, to merit publication for the benefit of the profession at large, inasmuch as I am sure that a series of this sort, cannot fail to be helpful to many men similarly situated.

All but one of my ninety-one cases were treated in private houses, and in the majority of cases, the nursing was done by members of the family of the patient, although I have kept several efficient trained nurses busy and have insisted upon their employment whenever it was possible. Many families do not appreciate the value of nursing by trained graduates, or cannot afford the expense. In such cases, I have had to make the best of the situation.

My routine treatment consists of the usual preliminary purgation, strictly liquid diet, consisting of milk, broth, water, or modifications of these. I order the liberal use of water for cold sponging whenever the temperature reaches above  $102.4^{\circ}$ , and in persistent high temperature, I resort to ironing of the spine with ice. I use drugs whenever the symptoms call for the employment of any special drug, but my main reliance has been upon the internal administration of acetozone.

In one or two instances where patients simply could not take the acetozone solution, even when the taste was disguised with various flavoring materials, such as orange or lemon juice, oil of gaultheria, saccharine, etc., I have placed the acetozone solution directly into the stomach through a stomach tube, first washing out the viscus with weak salt solution and then placing the desired quantity of the acetozone solution directly into the stomach. This procedure has been very successful whenever used.

I have the solution prepared and on hand and insist upon its being taken in liberal quantities, from four to six ounces religiously, and in addition to this, whenever the patient wants a drink of water, the acetozone solution is supplied and nothing else.

I insist upon the employment of the acetozone solution whenever and wherever it can be used. To this rigid rule I have adhered faithfully, and to it I attribute my exemption from fatalities and from severe complications.

Whether or not I am right can be easily determined from the fact that I have had ninety-one cases of typhoid fever without a death and with but two relapses. Whenever I have had charge of a typhoid fever case, I have used the acetozone treatment.

While some have not been so favorably affected as others, there has always been the same general modification of the course of the disease. The temperature always showed a lower maximum. The pulse showed the same improvement and maintained a more uniform range. There was decided improvement in the mental condition, as well as in all the gastro-intestinal symptoms. After the patients had become saturated with the acetozone solution, it was always noticed that very little sponging was necessary. My nurses have often spoken to me of the change in the typhoid cases and the comparatively little difficulty they had experienced in controlling the patients on acetozone, as compared with those who were not thus treated. All the patients took more food and assimilated it better on the acetozone than on any other treatment I have ever tried.

The complications have been much fewer in comparison with the other systemic treatments which I followed prior to taking up the acetozone treatment. Hemorrhage occurred in only two cases; one was slight and the other very serious. I have been particularly pleased at the practical elimination of gastric complications and have been spared many of the distressing complaints which used to give me so much trouble.

Apparently, acetozone produces no constitutional effect beyond copious diuresis. The chief indication in typhoid fever being to restrict the infection and remove its cause, I first order a brisk cathartic and follow this up with acetozone solution, which is naturally suggested in this condition, inasmuch as it can be taken in the form of an aqueous solution, limited only by the capacity of the patient to swallow and absorb it, without any liability to even temporary inconvenience. I prefer the oral administration to any other. High enemas are given twice daily until the bowel movements are controlled by same. Enemas are then limited to one or two a day as necessary. The patient receives a cleansing bath daily, with complete change of bedding and clothing.

Some sort of drug is needed and acetozone answers the purpose of combined beverage and medicine. Most patients are willing to do



whatever is necessary to make my treatment effective and the best results have always been accomplished when the acetozone has been taken copiously.

My method of preparing the solution is as follows: Add acetozone to water in the proportion of fifteen grains to the quart, making up two or three quarts at a time. This stock solution is allowed to stand for a time until the powder settles to the bottom and is kept in the refrigerator so that it is cool, and therefore, more palatable. The dose of from four to six ounces is taken as often as possible until case is under control, then is regulated by the routine of the case.

If the patient objects to the taste, which not infrequently happens, I direct the nurse, or the member of the family in charge of the case, to add, just before taking, a little orange or lemon extract or the juice of these fruits, which as a rule, overcomes any distaste, or else flavor the solution with saccharine and oil gaultheria.

In my experience, acetozone, as an intestinal antiseptic, is superior to anything else I have ever employed. I have noticed an immediate effect upon all the symptoms shortly after the institution of its use. The odor of the stools and of the sick-room is markedly improved, so much so as to cause comment.

Convalescence of the patients has been rapid. In fact, it has been difficult to convince some of them that they were ill after the second or third week. I have had no serious trouble from tympanites nor been much embarrassed by delirium.

The very best results, of course, have been shown in those patients who have been under the care of trained nurses, inasmuch as under these conditions my orders were carefully carried out and whatever has been necessary for the care of the patient or the treatment of symptoms has been done properly and promptly. On the other hand, many of the patients were given the solution irregularly, owing to the resistance of the patient and the lack of persistence on the part of the over-sympathetic family attendants, but even in spite of this, the acetozone treatment was successful in every case.

My series takes in cases of all ages, from the very young to those well along in life, and of both sexes. There has been no question about the diagnosis in any of the cases, as they were all typical cases of typhoid fever and in obscure cases the clinical diagnosis was confirmed by laboratory findings.

It might be of interest in connection with this paper to refer to certain specific cases, and therefore, I have included eleven cases taken at random, and it will easily be seen by reference to the temperature charts that the fever shows the effect of the acetozone treatment very shortly in each instance, showing a gradual fall until the normal standard was reached and maintained.

Case I. Mrs. D. E. M., aged forty years, married, housewife, first came under my care on April 6th, 1904, stating that she had been in bed for five days, trying to fight off the illness which was overpowering her. She complained of intense frontal headache, persistent nausea and that it was impossible to retain any food; prostration severe, pulse 122, temperature  $105.6^{\circ}$ . Abdomen was distended and very tender. Patient's expression was apprehensive. She was exceedingly nervous and complained continually of the pain in her head. Constipation obstinate.

Provisional diagnosis of typhoid was made, confirmed by a positive Widal test made three days later.

Preliminary treatment consisted of ten grains of calomel, given at one dose, followed by an ounce of castor oil in four hours. Enema ordered to be given at once and to be continued until results were obtained. Nurse was directed to iron spine with ice until temperature was reduced to  $102.4^{\circ}$ . All food prohibited, stomach Lavage was ordered and acetozone to be given by the tube. An enema and bath were ordered daily at 8 a. m.

This was one of the severest cases in the entire series. The temperature ranged very high and the complications, myocarditis and nephritis, were exceedingly serious. Prostration was extreme and I expected to lose the patient any day up to the sixteenth. Then, on the twenty-second a violent hemorrhage took place. Operation was suggested, but the use of adrenalin and saline hypodermoclysis tided us over. On the twenty-fifth another hemorrhage took place, temperature becoming sub-normal, pulse running to 160. The administration of solutions of adrenalin into the veins, accompanied with elevation and cold applications to the abdomen, checked this hemorrhage. From this time on the improvement was gradual but positive, temperature becoming normal permanently on May 12th. On the 17th the patient was discharged convalescent.

In this case it was frequently found necessary to place the acetozone solution directly into the stomach, using the stomach tube, as the taste was extremely disagreeable to the patient.

Case II. Mrs. J. K., age twenty-seven years, married, housewife, first came under my care on July 1st, 1904. Had never been sick, except a normal confinement two years before. At this time was five months pregnant. She had felt very sick but came to my office. Complained of headache, felt depressed, dull and sore all over, no appetite, temperature  $99.4^{\circ}$ , pulse 67. Constipated, tongue coated. No plasmodium in the blood. Sent to bed in charge of nurse.

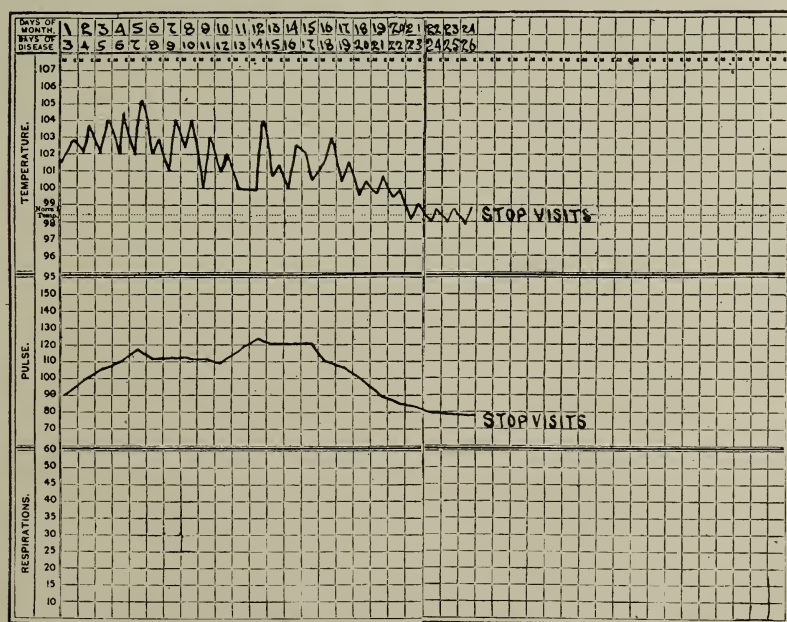
Provisional diagnosis typhoid, confirmed later by positive Widal test.

Preliminary purging by ten grains of calomel, followed four hours later by magnesium citrate, later by high enema. Immediately

put on acetozone solution, which was crowded. Ironing with ice ordered for all temperature over  $102.5^{\circ}$ . The temperature in this case did not range very high, but there was one complication in the second week, a miscarriage accompanied by a severe hemorrhage. At this time both the diazo reaction and the Widal test were positive. With the exception of the above complication, the course of this case was not unusual, temperature ranging lower each day, until on the 22d of July, it became permanently normal. A week later, patient was put on semi-solids, and beginning with the next week, on full diet, at which time she was discharged practically well.

Case III. Mrs. J. M., age twenty-seven years, married, housewife, first consulted me on August 1st, 1904. Had apparently been sick for five days when I saw her. Complained of intense frontal headache, with malaise and sensitive areas upon the limbs. No appetite. Complained of a chilly feeling. Bowels very loose. Entire abdomen very tender. Temperature  $103.4^{\circ}$ , pulse 81. Frequent nose bleed. Widal positive. Diazo positive. Diagnosis, typhoid. The first few days of this case, the temperature ranged very high, touching  $105$  several times in the afternoons. The case looked very critical up to the 10th. Had some trouble with tympanites, which ceased after the 10th. No other complications. Acetozone was instituted and the temperature controlled by cold spongings. The temperature became normal on the 1st of September and has remained so.

Case IV. Mr. A. B., I first saw on February 2d, 1905, in the even-



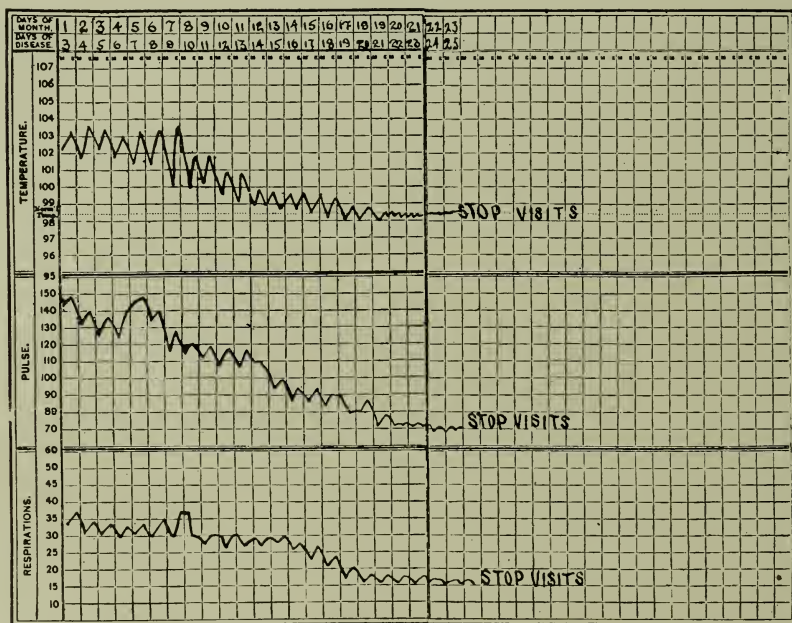
Miss M. T., age 23. Case 81. Specimen No. 10.



ing, when his temperature registered  $104^{\circ}$ , with the gastro-intestinal symptoms most severe. The statement was made to me that the patient had had ten bowel movements that day and had also vomited severely. He was immediately started on the acetozone treatment and cold spongings, and the diet was restricted, as is customary, to strictly liquids, and these but sparingly. Even the small amount given could not be retained during the first few days, owing to severe emesis. His temperature reached  $104^{\circ}$  each afternoon for the first three days and thereafter did not reach  $103^{\circ}$  but once during the course of the illness. On the afternoon of the 13th, when the patient's temperature reached  $102^{\circ}$  for the last time (never afterwards going to  $101.5^{\circ}$ ), he complained of being hungry. The treatment was continued without any change, and on the 21st of February, or the nineteenth day after coming into my care, his temperature reached normal to remain there, and on the 26th he was discharged.

This case, during the first few days, was exceedingly severe and the rapid recovery can be directly attributed to the acetozone, combined with my regular general measures.

Case V. Miss V. McG., an American girl, fifteen years of age, by occupation a box-maker, I first saw on February 28th, 1905, and she was an exceedingly sick girl. Her temperature, on several occasions, nearly reached  $105^{\circ}$  and all of the symptoms were most pronounced. The family could not afford a trained nurse, so her mother acted in this capacity. The patient experienced some trouble during



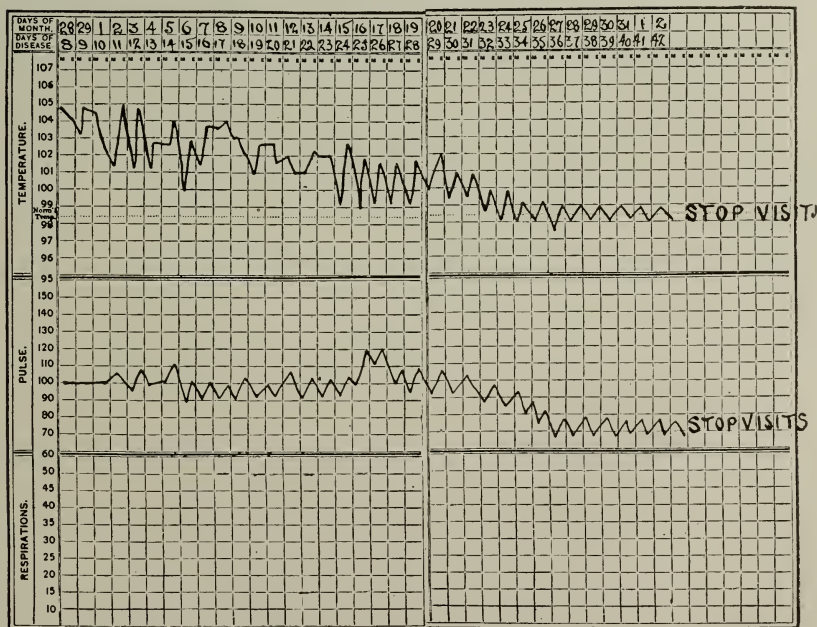
Mrs. H. F. F., 27 years. No. 72. Specimen No. 9.

the first few days in taking the full amount of acetozone which I required, but afterwards had no difficulty in taking it regularly and in full quantities. Her fever showed a tendency to rise during the first two weeks, but after the nursing arrangements had improved, owing to the family's acquiring experience, the temperature fell rapidly and reached the normal permanently on the thirty-fifth day of the illness, or the twenty-eighth day after my assuming charge of the case.

Case VI. R. W., age fifteen years, school boy, first seen March 22d, 1905, with intense frontal headache, complete loss of appetite, nausea and diarrhea. Temperature  $106^{\circ}$ , pulse 110. Boy was dull and listless. Abdomen distended and very tender. Profuse nose bleed two days before. Diagnosis of typhoid, confirmed later on by positive Widal. He was immediately placed upon my regular acetozone treatment and the course was satisfactory throughout, with the exception of two days. The second day after I saw him his temperature in the afternoon touched  $107^{\circ}$  and the next day  $106^{\circ}$ , but there was gradual subsidence and on the 10th of April I ceased my visits. He was ordered to continue the acetozone solution for two weeks and then to begin the full diet.

Mathes was not using necessary amount of ice to control temperature, so insisted on trained nurse. Mathes asked for two more days, and uses 480 pounds of ice those two days with the desired result—continuing same for several days.

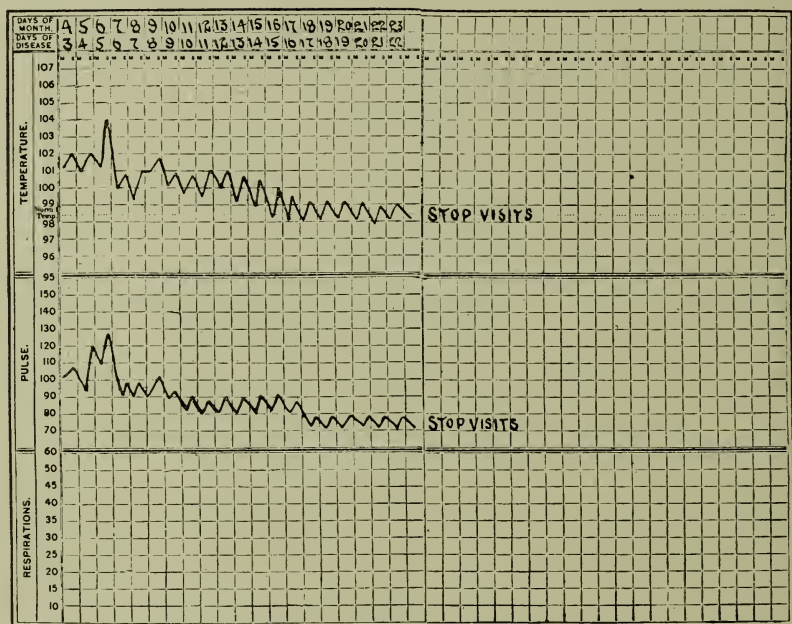
Case VII. Mr. B. W., an American engineer by occupation, came



Miss Vida Mc G., age 15. No. 63. Specimen No. 5.

into my office on April 12th, 1905, late in the afternoon, with a sub-normal temperature ( $97^{\circ}$ ). His previous history led me to believe that this was a case of malarial infection and for two days he was so treated. Then unmistakable symptoms of typhoid appeared and he was put to bed, given a dose of magnesium sulphate and the acetozone treatment started. This was undoubtedly a case of typhoid fever, but running a very mild course, and on the 25th of April, or the thirteenth day after he called me in, his temperature reached the normal.

Case VIII. Miss B. G., American girl, sixteen years of age, first came under my care on the morning of July 4th, 1905, with a temperature of  $101.2^{\circ}$ . The acetozone treatment was started at once. During the first few days her bowel movements were very numerous, seven to nine daily. On the third day her temperature reached  $104^{\circ}$ , with a pulse of 126, but after vigorous application of acetozone solution, it never afterwards went above  $101.4^{\circ}$ , reaching the normal permanently on the 18th of the month, or the fourteenth day after I assumed charge of the case.

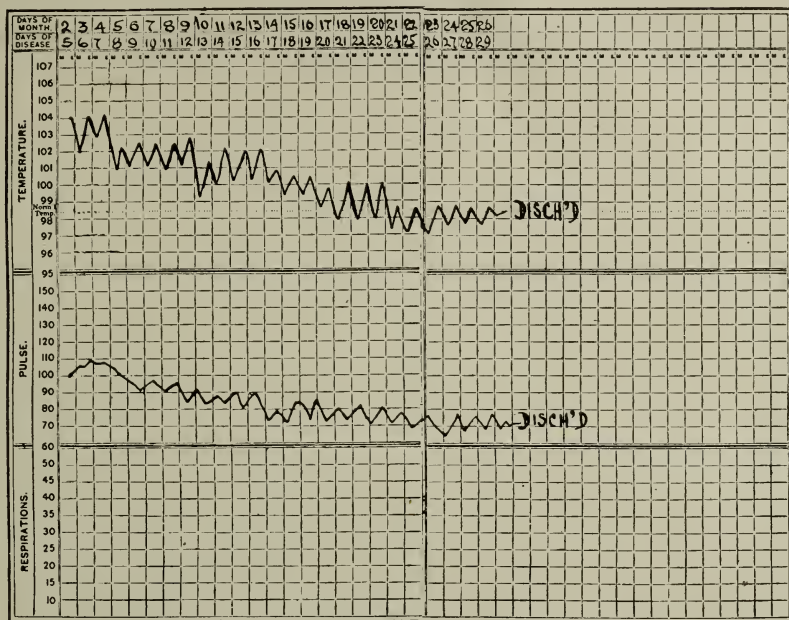


Miss B. G., age 16. No. 69. Specimen No. 8. Miss B. S., Nurse.

Case IX. Mrs. H. F. F., American, housewife, age twenty-eight. I first saw on the 1st of August, 1905. She had been sick for two days. Her pulse was rapid and feeble, ranging about 140. Temperature  $102^{\circ}$  to  $103^{\circ}$ . Bowel movements from four to eight daily. The family did not wish to bear the expense of a trained nurse, but the illness was so severe and resisted the treatment so fiercely during the first five days, that I insisted upon the employment of a trained nurse, who



took charge on the sixth day. From that time on, things went much better. The temperature only reached  $103^{\circ}$  once after the nurse took hold, and reached the normal permanently on the 18th of August, or twenty-one days after the patient became ill.



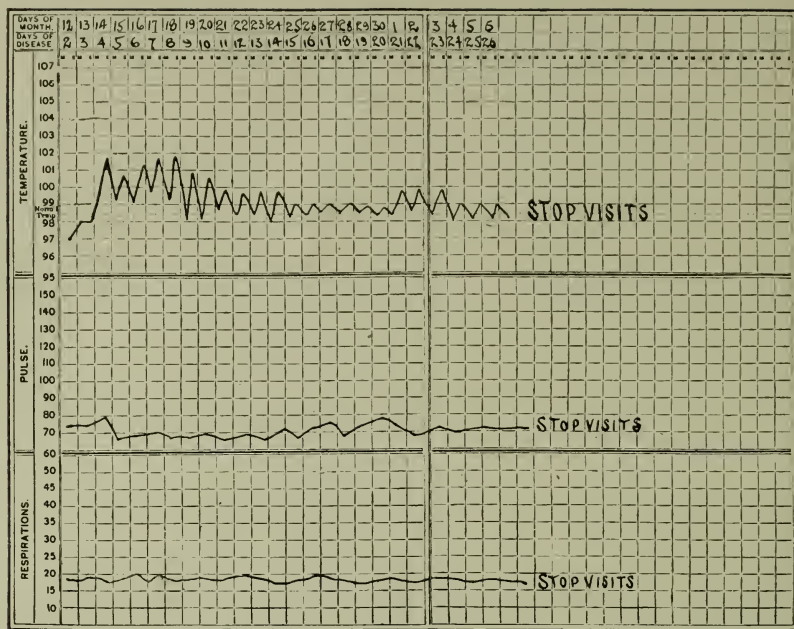
Mr. A. C. B., Case 60. Specimen No. 4. Miss Rose Riley, Nurse.

A reference to the temperature, pulse and respiration curves will show very beautifully the effect of the vigorous administration of acetozone and the other measures which are so admirably carried out by an efficient trained nurse.

Case X. Mrs. M. T., American housewife, age thirty-three, grew much worse after I first saw her on the 1st of November, 1905. Five days afterwards her afternoon temperature reached  $105^{\circ}$ . No nurse was employed in this case, and as a consequence, the temperature shows very considerable variation, reaching the normal, however, in spite of inefficient nursing and irregular treatment, on the 21st of November, or three weeks after the treatment was begun.

Of the two relapses in my series, one was the following:

Case XI. This was a trained nurse who had been employed by me for quite a while, and who had been exposed to the infection in taking care of a patient out of the city. She was put on my regular acetozone treatment and was convalescent in twenty-three days from the beginning of her illness. Thirty days from her first day in bed, which was the fourth of the illness, she went home, traveling 350 miles, relapsed and treated herself for sixteen days, using the acetozone treatment which she had learned so well while nursing my cases.



Mr. B. W., 37 years. Case No. 57. Specimen No. 7.

When she returned I asked her why she had not called in a physician and she stated that the only physician to be had in the town where she resided would not use the acetozone treatment, so she preferred to "go it alone." Rather risky, it is true, but she reported here for duty entirely well seventy-two days from the onset of her original attack, and has been well ever since.

These are typical histories taken at random from my series, no effort at selection being made. Very many more could have been illustrated, but these few will, I think, serve to demonstrate that typhoid in private practice can show just as good results as in hospitals, provided the treatment be persisted in.

The cardinal principles are purgation, followed by colonic flushings twice daily, then control of the symptoms as they arise by suitable medication, liquid diet and not too much of it, urging upon the patient the imbibing of large quantities of water in the shape of acetozone solution, no other liquid but this solution being allowed in the form of a beverage. At first the patients may have difficulty in taking the quantities desired, but shortly they, or their family—whosoever is at fault,—either succumb to my insistence or are desirous of co-operating, and thereafter the patient finds no difficulty in taking much larger quantities than one would suppose ordinarily possible. When ever the temperature reached  $102.5^{\circ}$ , sponging was instituted. That this treatment is successful in private practice is evident by my having had, in four years, ninety-one cases without a death and with but two relapses.

A CONTRIBUTION TO THE SURGERY OF THE URETER.  
TRANS-URETERO-URETERAL ANASTOMOSIS.\*I—INTRAPERITONEAL II—RETROPERITONEAL *a.* ANTERIOR TO AORTA AND  
VENA CAVA *b.* POSTERIOR TO AORTA AND VENA CAVA.

BY NORVELLE WALLACE SHARPE, M. D., ST. LOUIS, MO.

I. *Introduction:* With justice does the ureter command the attention of the surgical world; not only as an important factor in the urinary system, its anatomy, pathology, symptomatology and therapy; but so relatively unexplored has this duct been until within a score of years that to a very interesting degree it is now securing an individual consideration. Nor is this interest wholly anatomic, pathologic, etiologic nor therapeutic, for the ever present possibility of ureteric injury in abdomino-pelvic operative manipulations, or involvement in uretero-abdominal pathologic conditions invests the ureter with a clinical weight not inconsiderable.

We are indebted to Quain<sup>1</sup>, Morris<sup>2</sup>, Disse<sup>3</sup>, Cunningham<sup>4</sup>, Protopopow<sup>5</sup>, Freund and Joseph<sup>6</sup> for much of our best general anatomic knowledge; to Margaroucci<sup>9</sup>, Monari<sup>10</sup>, Holl<sup>7</sup>, Krause, Tandler and Halban<sup>8</sup>, Waldeyer<sup>11</sup>, Feitel<sup>12</sup> and Sampson<sup>13</sup>, <sup>14</sup> for special anatomic research. Probably the pioneer work of Pawlik and Kelly has been most illuminative in the pathology, diagnosis and therapy of the upper urinary tract; while a distinct stride has been measured by the admirable work of Sampson in the distal half. Ureteric surgery owes its status largely to the work of Gluck, Zeller, Poggi<sup>19</sup>, Tizzoni, Fritsch, Schopf<sup>23</sup>, <sup>24</sup>, Hochenegg, Tauffer, Fenger<sup>17</sup>, Kuester<sup>15</sup>, Robson, Mynter<sup>16</sup>, Winslow, Emmett<sup>19</sup>, Parvin<sup>16</sup>, Van Hook, Bloodgood, Bovee<sup>26</sup>, Cushing, Markoe and Wood<sup>25</sup>. A worthy bead-roll whose names will remain associated with this interesting field of surgical work.

II. *History.* One of the earliest operations, if not actually the pioneer case of ureteral anastomosis, was made by Simon, of St. Thomas' Hospital, London, in 1851, in an effort to anastomose the ureters into the rectum extraperitoneally. Nussbaum followed the method of Simon in 1876, also Smith in 1879. Most of the early attempts were made for the relief of vesical exstrophy. Gluck and Zeller were among the early experimenters on animals. In 1886 Schopf<sup>23</sup>, <sup>24</sup>, a German, and Poggi<sup>19</sup>, an Italian, within a few days of each other performed an end-to-end anastomosis, though by different methods. Much experimentation on animals now developed in the years following this notable advance. Budinger, in 1896, endeavored on animals, to duplicate previous work, but with fatal results. Tizzoni and Poggi removed the entire bladder; a new receptacle was

\*Read before the St. Louis Medical Society, September 1, 1906.



formed from an intestinal loop, and the ureters were implanted therein. At this period the Italian surgeon had easily outstripped his rivals. In 1892 the attractive technique of Van Hook was published. In 1897 Bovee in reporting a personal case, collected 12 cases of ureteral anastomosis from the literature, two of which must, however, be discarded. He materially modified the method of Van Hook. The following method classification of uretero-ureteral anastomosis, together with exponents of each method, tabulated by Markoe and Wood<sup>25</sup> is excellent:

- |                                |   |                                    |                       |
|--------------------------------|---|------------------------------------|-----------------------|
| I. Transverse end-to-end.      | { | (a) Without support.               |                       |
|                                |   | Schopf Hochenegg, Cushing.         |                       |
| II. Oblique end-to-end. Bovee. | { | (b) With support. Tauffer.         |                       |
|                                |   |                                    |                       |
| III. Invagination.             | { | (a) Without support.               | (1) Ureter not split. |
|                                |   | Poggi.                             |                       |
|                                |   | (2) Ureter split to invaginate.    | Mayo Rob-             |
|                                |   | son, Winslow.                      |                       |
|                                |   | (b) With support, Markoe.          |                       |
| IV. Lateral implantation.      |   | Van Hook, Kelley, Emmett, Doherty. |                       |

No inconsiderable ingenuity has been displayed in the effort to overcome the hiatus caused by an excessive loss of ureteral substance. Thus Bovee<sup>26</sup> based upon successful experimental work on two dogs, advises dislocation of the kidney downward, with suturing in its new bed subsequent to the completed anastomosis. Monari believes that the ureter may be attached to the abdominal wall under considerable tension, and when time has produced the required length, a lateral anastomosis may be attempted. Rydygier suggests implanting the severed ends on the abdominal wall and connecting them by a duct lined with skin; while Van Hook would elevate a flap from the bladder, develop a diverticulum and so bridge over the space to the proximal end of the ureter.

At the close of this chapter of ureteral surgery none of these suggestions had been performed on man; and the choice rested between implantation into the bladder, bowel, or skin.

III. *Anatomy of the Ureter.*—For an exhaustive study of the anatomy of the ureter search must be made through various monographs which discuss the theme. The following points will, however, prove germane to the subject in hand, and will be helpful in the final analysis: The adult ureter ranges from 25 to 40 cm. in length, while the outside diameter may be said to be 3 to 4 mm.; yet the fact remains that both the outside diameter and lumen vary considerably owing to curvings and sacculations that are fairly constant. The course of the ureters is not regular nor symmetrical. So far back as 1869 Freund and Joseph<sup>27</sup> showed that the left ureter is nearer the mid-line and as a rule nearer the uterus and its cervix. Crossing the common iliacs they are from 5.7 to 7 cm. apart; then following the pelvic curve they separate until 2 to 3 cm. below the iliacs, from 10 to 13 cm. intervenes; at line of the internal os, 9.8 cm. apart; on entering the bladder, 2.7

to 3.5 cm. apart. The distance between the external os and the right ureter, 2.5 to 3.3 cm.; the left ureter, 1.5 to 2.7 cm. Luschka<sup>28</sup> and Holl<sup>29</sup> give measurements which vary somewhat from the above, but agree as to the asymmetry ordinarily encountered. Quenu and Duval have suggested as a valuable landmark in identifying the lower ureter the bifurcation of the common iliac artery. The right ureter will be found 1 cm. external to the bifurcation and crosses the iliac vertically, while the left, ordinarily, is exactly upon the bifurcation. The ureter is composed of three layers. The outer coat is fibrous; the middle coat is muscular, whose thin smooth longitudinal folds manifest some tendency to stratification; the intima is mucous. The muscular coat, inducing a fairly rhythmic peristalsis, is assisted by the force of gravity in establishing the cloacal function of the ureter. Waldeyer<sup>30</sup> has directed our attention to the fact that certain longitudinal bundles extend from the bladder out on the ureter. These are united by connective tissue, and separated from the ureter proper by a space which he considers a lymph-space. This sheath ranges from .5 to .75 mm. in thickness, and extends within the ureter from 3 to 4 cm. Disse, however, claims that these bundles do not arise from the bladder, as might be inferred, but from the ureter, and thinks it probable that their hypertrophic condition, together with the subjacent space, follows vesical contractions exerting traction on the outer ureteral coat. There is, in addition to this sheath of Waldeyer, a second fibro-muscular covering which, starting upon this structure and somewhat intimately blending with it, continues upward. Between this sheath and the ureter proper are found fine fibrous fascicles and adipose tissue, which as has been suggested by Sampson may subserve the function of a cushion protecting the ureter. It is a moot point as to whether true lymphatic spaces exist in this tissue. Sampson has also directed attention to the contractile mobility of the ureter within this sheath, its protective influence against inflammatory and malignant extension processes, and that within its embrace is found the periureteral arterial plexus. The lymphatic system is well developed and found within the different layers. The blood-supply of the ureter is drawn from branches of the renal, spermatic, utero-ovarian, internal iliac, inferior mesenteric, middle hemorrhoidal and inferior vesical arteries; while its veins, with apparently no prevailing rule, empty into neighboring vessels. Disse has shown that the pelvis of the kidney draws its blood-supply from a branch of the renal artery which courses down over the abdominal ureter; this section also derives nourishment from the spermatic. The pelvic section owes its main supply to the middle hemorrhoidal and inferior vesical arteries. In general it may be noted that these trunks parallel the ureter, to which they are attached by connective tissue. From these parallels arise at comparatively frequent intervals branches which, piercing the muscularis, still further divide within the intima into longitudinal sub-branches found fairly

constantly from the kidney to the bladder. Capillary systems to the epithelium and muscularis are the terminals of the arteries of the propria. From these systems the venous current is carried through a plexus, largely longitudinal, inside the muscularis. This venous plexus of the intima empties into channels within the adventitia, which parallel the arteries. Probably the most valuable of our anatomic assets of comparatively recent acquisition is the periureteral arterial plexus, whose orientation has been so felicitously accomplished by Sampson.<sup>31</sup> He has shown that from the aorta, the renal, ovarian, iliac, uterine, etc., arteries arise branches which may be styled uretero-subperitoneal arteries. These arteries ordinarily divide into two branches; first, an ureteral branch which helps to form the periureteral arterial plexus; second, a subperitoneal branch, which supplies the tissue contiguous to the ureter.

1. The ureteral arteries on reaching the ureter divide into ascending and descending branches, both paralleling the ureter and united to it by a loose fibrous tissue; a free anastomosis exists between the ascending and descending sub-branches. Thus, enveloping the ureter, is found a longitudinal arterial system, whose offshoots abundantly anastomose, extending from the kidney to the bladder. From these large trunks smaller branches arise which imbed themselves somewhat more deeply in the perimuscular fibrous tissue of the ureter than do the stems; and these, too, anastomose, thus forming with the main trunks a periureteral arterial plexus extending the entire length of the ureter up over the pelvis of the kidney and still accompanying the ureter as it pierces the bladder-wall. From this plexus still smaller vessels arise which penetrate the walls of the ureter; and yet other channels are found which, leaving the ureter, supply the adjacent tissues, and even these may anastomose with branches of other vessels supplying these parts.

2. The subperitoneal divisions of the uretero-subperitoneal vessels supply the tissues adjacent to the ureter and also, in places, the peritoneum. These may anastomose with each other and with branches from neighboring vessels including branches from the ureteral plexus, and thus may serve as a source of nourishment to the ureter. And yet other sources exist; for the uterine and vesical arteries of one side anastomose with those of the other, and in addition there is a free anastomosis between the uterine and ovarian arteries; and again the branches of the latter anastomose with branches from the renal. The periureteral arterial plexus thus is shown to receive its blood-supply from definite ureteral arteries, and may be nourished indirectly through the anastomosis of these arteries and branches from the plexus itself with the branches of vessels supplying the tissue circumjacent to the ureter.

Sampson has also shown that in the dog the ureter will withstand extensive manipulation even to stripping with the finger nail, or free-



ing throughout its entire length, and no untoward effect will follow provided a sufficient number of nutrient vessels remain intact to preserve the integrity of the ureter. [Of interest at this point is the record of Margaroucci<sup>32</sup> that he isolated the entire ureter in ten dogs; in none necrosis followed. He, too, explains this fact by the existing arterial supply with its numerous anastomoses. He claims that the supply from the renal artery alone is almost sufficient to nourish the entire ureter. Durante<sup>33</sup> accomplished the same feat on a woman, where the ureter was involved in a gigantic cystadenoma of the broad ligament.] And on the other hand manipulation which destroys the periureteral arterial plexus even though far less severe than in the former instances, will as a rule, so impair the vitality of the ureter that necrosis will supervene. He concludes that when the integrity of the ureter is impaired, as by malignant invasion, and choice remains, resection with end-to-end anastomosis or a vesical implantation is preferable to any method which demands a stripping so severe as to imperil the function of the periureteral arterial plexus.

IV. *Indications for Ureteral Anastomosis.*—The indications for an ureteral anastomosis are sufficiently obvious to justify the omission of special narration and discussion. In brief: 1. Any condition in an operative attack within the abdomino-pelvic area which necessitates an interruption of the continuity of the ureter will demand consideration for the restoration of the integrity of the urinary channel. 2. Operative casualties occurring within the abdomino-pelvic area which seriously impair or destroy the continuity of the ureter. 3. Any pathologic condition existing in the abdomino-pelvic area which so encroaches upon the ureter, whether by extension or pressure, that its function is seriously handicapped or destroyed.

These three classes will be found to include the majority of cases coming under observation. Pathologic conditions associated with calculi, fistulas, etc., are largely of collateral importance. The more commonly employed means for solving the difficulty have been implantation in bowel, bladder, or skin, and uretero-ureteral anastomosis. Nephrectomy of the crippled side should, with justice, be definitely eliminated from the list of restitutorial methods, for the impaired ureter is neither restored nor so transferred that its cloacal functionation may continue; and in addition the kidney, which at this point in the patient's career has but a collateral significance, is ablated. As well might one class an amputation following fracture as a restitutorial measure. Ligation of the proximal end of the ureter with induced hydronephrosis and subsequent cessation of nephric function (corroborated by the experimental work of James<sup>40</sup>) should also be excluded; for while the operative work is obviously less perilous than a primary nephrectomy, the end result is analogous—the patient is deprived of the use of his kidney. But this analogy is not complete, for it is impossible to state the actual effect upon the organism when

a kidney is thus abruptly thrown out of functionation and an infection atrium may be found existent at any point between the kidney capsule and the ligature encircling the distal end of its ureter. That the remaining kidney may be seriously crippled,—indeed, absent; that such conditions are all too frequently not ascertained previous to an abdominal operation; that it is most difficult to obtain prompt and exact information in the stress of so serious an operative casualty as a cut ureter, when time is priceless, seem to be statements of facts so vitally patent as to demand no further discussion, yet that imperatively indicate restitutional rather than destructive surgical measures. Of these various restitutional measures, we are, in this discussion, concerned with but the last,—ureteral anastomosis.

V. *Methods*.—Consideration of the methods scheduled in Section II will show that the general plan of procedure does not vary in any vitally essential detail.

In Groups I. and II. Apposition of extremities is direct, transverse or oblique, with or without support.

Group III. Apposition of extremities is by direct invagination, with or without splitting of segment, with or without support.

Group IV. Apposition of the extremities by lateral invagination, without support.

In Groups I. and II. Outer, middle and inner coats come into direct contact with their several fellows of the other segment.

In Groups III. and IV. The middle coats do not appose each other, but contact is permitted between the outer sheath of the male segment and the inner coat of the female, save when the outer sheath of the male segment has perchance been liberally sacrificed,—it then may be assumed that the muscularis of the male segment would be brought in apposition with the intima of the female. A modified Jobert's invagination suture seems to have been most commonly employed.

VI. *Personal Work*.—It may be readily conceived that a lateral spinal deflection would so seriously alter ordinary anatomic relations that any one of these excellent methods would prove technically difficult, if not actually impossible.\* And again so large a section of the ureter may be lost, whether as a result of pathologic involvement or surgical intervention, that here also a similar difficulty, or impossibility, would be confronted. With these matters under consideration,

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\*Cognate to these personal statements are the observations of Bologna (III Cong. Dell' Ass. Nazionale dei Med., 1905). Among widespread changes developed concomitant with, or sequent to, a scoliosis, he notes that the kidney also suffers, the one on the invaded side being sometimes laterally compressed between the vertebral column and the chest-walls, while the kidney on the concave side hypertrophies. The contracted psoas may so close the lumen of the ureter as to develop an hydronephrosis.

and in search of a method that might prove efficacious, in 1900 was devised and performed on two dogs the lateral invagination of the proximal end of one ureter into its fellow. In my "Data of Experiments" this procedure was designated "Intraperitoneal trans-uretero-ureteral anastomosis." The first point to be oriented was, Is the conception an anatomic possibility? the second, Is it a physiologic success? The following notes (heretofore unpublished) show:

*Experiment I.*—Nov. 26, 1900. A small mongrel dog was anesthetized, the left ureter, through a median incision, isolated, divided, the lower segment ligatured and dropped, the upper clamped; the right ureter isolated, a suitable longitudinal incision made, a modified Jobert's invagination suture (fine silk) placed in anterior face of proximal extremity of left ureter, the mesentery perforated close to its root and at an appropriate level, and the left ureter drawn through the longitudinal incision of the right, by means of the two suture ends which were then caused to transfix the three coats of the right ureter below the lower angle of the longitudinal incision. This suture was tied, also three others, one inserted at the upper angle formed by the junction of the ureters, and two, to snugly close the incision, above the junction, which had been made a trifle too long. The lines of junction were covered by a fold of mesentery appropriately sutured.

No special postoperative occurrences. The dog lived eighteen hours. Autopsy showed a competent anastomosis, with no leakage nor ballooning of either ureter or kidney pelvis; no evidence of peritonitis. There was urine in the bladder. The mercurial manometer showed that the anastomosis suture lines withstood up to a pressure of 60 mm. of mercury, at which point leakage followed.

*Experiment II.*—Dec. 13, 1900. A small mongrel dog was anesthetized and again the proximal end of the left ureter invaginated laterally, through a longitudinal incision, into the right. The technical details of this experiment differed in no essential from those noted in *Experiment I.*, save that no additional sutures were required to close the longitudinal incision, and two additional sutures were inserted laterally at the spread of the longitudinal incision, made by the inserted ureter, in order to more snugly approximate the union. The mesentery was sutured over the anastomosis. The dog lived forty-eight hours. Autopsy showed a competent anastomosis with no leakage, nor ballooning of either ureter or kidney pelvis; no evidence of peritonitis. The bladder contained urine. The mercurial manometer showed that the anastomosis suture lines would withstand up to 50 mm. of mercury, at which point leakage occurred.

These experiments were carried out under adverse conditions, in that facilities were not at hand for suitable postoperative care of the dogs. After consideration of the autopsy findings, of which the essentials have been given, both Dr. Budgett (late professor of Physiology, Medical Department, Washington University), who most kindly assisted me and to whom my thanks are due, and I were strongly inclined to the belief that death followed in both experiments from these conditions rather than from any factor directly attributable to the operations.

*Conclusions.*—I. These experiments have proved that an intraperitoneal trans-uretero-ureteral anastomosis is an anatomic possibility.



One dog lived eighteen hours, the other forty-eight hours; within these brief periods union sufficient to withstand up to 60 mm. and 50 mm. (mercurial manometer) respectively had been secured. Neither hydronephrosis nor hydro-ureter was in evidence. Urine was within the bladder. It would seem, therefore, even within the limitations above noted that

II. An intraperitoneal trans-uretero-ureteral anastomosis is a physiologic success.

These experiments were not recorded in the literature and nothing further was attempted along this line of research until March, 1906, when the following procedures were devised and executed on the cadaver. The reasons for altering the above plan of operative attack were, in brief, that it was apparent that if a technique could be constructed that would more nearly protect the ureter from injury and from involvement with other abdominal structures, and in addition conserve and perchance add to its normal blood-supply, a distinct stride in advance would have been measured. These conclusions were based upon a not more than conventional comprehension of the blood-supply of the ureter. They were, however, confirmed when the masterly exposition of the blood-supply of the ureter by Sampson was given to the surgical world. The technical difficulties of the work, hereinafter described, were greatly augmented by the fact that the cadaver subject was not less than eighteen months old and had undergone several periods of drying and moistening, with the result of both tissue rigidity and brittleness.

*Experiment III.*—Through the anterior abdominal wall (which had previously been opened in the mid-line) the field was so cleared by laying aside obscuring structures that the courses of the ureters were developed. A suitable longitudinal incision through the peritoneum over the right ureter, and its isolation, above the promontory of the sacrum, were made. Retracting the ureter laterally, a retroperitoneal dissection, largely by the finger, but assisted occasionally by the handle of a scalpel, was made toward the mid-line, penetrating in the layer of connective tissue between the inferior vena cava and aorta posteriorly and the peritoneum anteriorly, until the left ureter was reached and identified. After liberating this for a sufficient distance it was brought across to its fellow, incised, the distal extremity released, and a lateral invagination through a longitudinal incision in the right ureter was made as detailed in Experiments I. and II. When the anastomotic area was released and the peritoneal edges of the longitudinal incision approximated, the entire field of manipulation was found to be wholly retroperitoneal. The difficulty of accomplishment was not excessive, and the ureters showed no evidence of undue tension.

Experiment III. proved that a retroperitoneal trans-uretero-ureteral anastomosis is an anatomic possibility.

Realizing, however, that a more direct route might be available, and that various conditions, such as a lordosis or a relatively extreme depth of the lateral abdominal fossæ, would make such a route highly valuable, the following procedure was performed:

*Experiment IV.*—The sutures of the above noted anastomosis were

liberated and the two ureters replaced in their normal positions. Through the same longitudinal incision over the right ureter a dissection was made toward the mid-line and passing between the vertebral column posteriorly and the vena cava and aorta anteriorly the left ureter was reached and again withdrawn to its fellow and again invaginated in the existing longitudinal incision by the method followed in the former efforts. When the anastomotic area was released and the peritoneal edges of the longitudinal incision approximated, the entire field of manipulation was found to be wholly retroperitoneal. In this instance, also, the difficulty of accomplishment was not excessive. It was also readily seen that owing to the shorter route traversed the ureters, whose liberated areas had not been extended over those of Experiment III., had gained demonstrable laxity.

While retroperitoneal trans-uretero-ureteral anastomosis, whether anterior or posterior to vena cava and aorta, is admittedly more difficult of accomplishment than intraperitoneal trans-uretero-ureteral anastomosis, yet it must be conceded that owing to the shorter hiatus to be bridged, with proportionately less disturbance of the ureters and their blood-supply, their probable subsequent vitality and power of functionation are enhanced in conformity with the postulates of Sampson. It is also probable that owing to the replacement of the ureters within beds which are closely allied to, if not in fact actually identical with, their normal surroundings, the interference with their blood-supply will be reduced to the minimum; and the possibility of nourishment to be derived from contiguous connective tissue and the peritoneal covering must not be ignored.

Beyond the technical difficulties inherent to such manipulations, and the necessary time involved, possibly superimposed upon other operative measures (both of which may, however, be diminished by practice), the query which will, in all probability, most readily spring to the minds is, whether or not sufficient pressure will be exerted by the aorta and vena cava to materially interfere with the patency of the transferred ureter (or the anastomotic area itself, if it should happen to be the point of contact). It is conceded that Experiments III. and IV. prove merely the anatomic possibility of a retroperitoneal trans-uretero-ureteral anastomosis, respectively ante-aorto-cavic and ante-vertebral. Suitable material has not as yet been secured for demonstrating if these procedures be physiologic successes. But in support of such an hypothesis may be adduced the well-known physiologic fact that a tube with well-defined mural structure which exhibits intratubular pressure, whether constant, periodic or occasional, is able to maintain its patency though extramural pressure be maintained. The rectum clamped between the sacrum and an augmenting pelvic fibroid is a fairly familiar example; the vena cava and the left common iliac vein fixed between the vertebral column and the aorta and right common iliac artery, is another. These examples are specially interesting for in the former an intratubular pressure exists only during evacuation of, or when the rectum is filled with, fæces; and in the latter it is known that dependent largely upon intrathoracic conditions the in-

tracavie pressure varies from an actual negative to but a few millimetres of mercury, while the diastolic and systolic aortic pressures presumably somewhat exceed the brachial pressures, which are 75 to 100 and 100 to 150 mm. respectively. In other words, the patency of a compressed tube may remain even though the constricting force be in excess of its own intratubular pressure. The intraureteric pressure reaches 60 mm. of mercury, beyond which an hydro-nephrosis threatens.\*

While from a purely controversial standpoint it might be inopportune to allude to the increase of ureteric pressure which follows when a constricting force is permitted to exert itself, yet clinically we are compelled to concede that this increase of intratubular pressure but enhances the probability of maintenance of patency.

In the final survey of the literature of ureteral surgery before closing this article, it was discovered that the proceedings of Experiments I. and II. carried out independently by myself in November and December, 1900 (not hitherto recorded), had been in all essentials paralleled by the following workers:

1894. Boari and Casati<sup>44</sup> tried uretero-ureteral anastomosis on the dog on eight occasions. The mesosigmoid was perforated; approach was gained both by the anterior abdominal route and also a lateral extraperitoneal route, of which close details are lacking. All dogs, save one, died within two or three days after operation. This one died from peritonitis with urinary infiltration on the eight day. The anastomosis had yielded at one point.

1895. Monari<sup>35</sup> followed the same method on the dog 13 cm. from the bladder. "At the end of a certain time," the dog was killed; stenosis of the ureter at point of penetration of the mesosigmoid found: no stenosis at site of anastomosis; hydro-ureter and ballooning of the kidney pelvis existed. He concludes that the operation may be made in man, in certain cases of urinary fistulas, in place of more serious procedures, and that no danger would follow if the ureter be replaced in "its fatty capsule."

1896. Wissinger<sup>26</sup> presented before the Medical Society of Hamburg "a beautiful specimen," but so far as the literature shows failed to mention either source or method.

1905. Freund<sup>37</sup> records that he implanted, in a bitch, the proximal end of an ureter in a fallopian tube; the other end of the tube was then connected with the bladder. Mention is made that a similar plan was followed by D'Urso and de Fabii. After stating that trans-ureteral anastomosis had been suggested as a possibility by Kelly, McMonagle and Sampson, he describes having cut a ureter in a dog; its central end was drawn by ligatures through the mesentery, and laterally attached by two sutures to its fellow; six silk sutures were utilized in completing a lateral anastomosis.

1905. Bernasconi and Columbino<sup>38</sup> performed uretero-ureteral anastomosis on ten dogs, both near the bladder and in the lumbar region. They believed that they were the first to successfully penetrate the mesentery. They direct attention to the fact that in the dog so loose is the posterior perito-

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\*Note that in Experiment I union was secured, in 18 hours, that withstood up to 60 mm. mercury, and in Experiment II union was secured in 48 hours, that withstood up to 50 mm. mercury. These interesting results are but another document in evidence that points suggestively to the value of these procedures.



neum that the ureter is furnished with what is practically a mesoureter; this, in particular, holds in the vicinity of the bladder. Eight of their cases were near the bladder, lateral implantation between two retention sutures; continuous sutures were employed, which were covered by a Lembert of the peritoneum. Three dogs died; five perfect results determined at end of three to four months. Two cases were transmesenteric at height of the umbilicus; ureters were found over the psoas, and anastomosis was made by the former method, save that the mesentery was perforated. The first dog died of peritonitis on eighth day; no leakage noted. The second survived. Autopsy at three months; result excellent.

So far as known the work detailed in Experiments III. and IV. has not been duplicated.\*

VII. *Chronology*.—The following chronologic table of the development of the surgery of the ureter outlines in sequence the rather more essential steps that have led up to the present-day work in uretero-ureteral anastomosis. It also includes the latest experimental work, so far as known:

- 1851. *Simon*.—Extraperitoneal uretero-rectal anastomosis.
- 1876. *Nussbaum*.—Extraperitoneal uretero-rectal anastomosis.
- 1879. *Smith*.—Extraperitoneal uretero-rectal anastomosis.
- 1886. *Schopf*.—Transverse, end to end, without support.
- 1886. *Poggi*.—Invagination, end within end, without support.
- 1892. *Van Hook*.—Invagination, lateral, without support.
- 1894. *Boari and Casati*.—Intraperitoneal trans-uretero-ureteral anastomosis,—dog.
- 1895. *Monari*.—Same method,—dog.
- 1897. *Bovee*.—Oblique end to end.
- 1900. *Sharpe* (Nov. and Dec.).—Intraperitoneal trans-uretero-ureteral anastomosis; lateral invagination,—dog.\*\*
- 1905. *Freund*.—Implanted the proximal end of ureter in a Fallopian tube. The other end of tube was then implanted in the bladder. (States that D'Urso and de Fabii had also accomplished the same.) In addition records a lateral intraperitoneal trans-uretero-ureteral anastomosis,—dog.
- 1905. *Bernasconi and Columbino*.—Intraperitoneal trans-uretero-ureteral anastomosis,—dog.
- 1906. *Sharpe* (March).—Retroperitoneal trans-uretero-ureteral anastomosis, lateral invagination,—cadaver.
  - (a) Anterior to aorta and vena cava, posterior to peritoneum.

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\*\*Not hitherto published.

(b) Anterior to vertebral column. Posterior to aorta and vena cava.\*

### VIII. *Conclusions.*—

I. The blood-supply of the ureter is ample, of which probably the peri-ureteral arterial plexus is the most essential factor.

II. Operative procedures which conserve the blood-supply, in particular the peri-ureteral arterial plexus, are ordinarily satisfactory.

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*Carrel.* Les anastomoses vasculaires: leur technique operateire et leurs indications. Ze congres des Medecins de langue Francaise de l'Amerique du Nord. Montreal, 1904.

*Floresco.* Conditions de la transplantation du rein. Recherches sur la transplantation du rein. Jour. de Physiol. et de Pathol. generale, 1905.

*Carrel and Guthrie.* Functions of a Transplanted Kidney. Science, October 13, 1905.

*Carrel.* Transplantation of Organs. Jour. Am. Med. Assn., 1905, vol. xlv p. 1645.

*Carrel et Morel.* Anastomose bout a bout de la jugulaire et de la carotide interne. Lyon Medical, 1902, v. 99, p. 114.

*Carrel et Morel.* Presentation d'un chien, porteur d'une anastomose arterie veineuse. Lyon Medical, 1902, v. 99, p. 153.

*Carrel.* Anastomosis and Transplantation of Blood-vessels. American Medicine, 1905, August.

*Carrel and Guthrie.* The Reversal of the Circulation in a Limb. Annals of Surgery, 1906, v. xliii, p. 203.

III. When the integrity of the ureter is impaired, restitutorial rather than destructive surgical measures should be followed.

IV. Of which restitutorial measures the various methods of uretero-ureteral anastomosis are recommended.

V. Intraperitoneal trans-uretero-ureteral anastomosis is an anatomic possibility; it is also a physiologic success.

VI. Retroperitoneal trans-uretero-ureteral anastomosis, whether anterior or posterior to the aorta and vena cava, is an anatomic possibility. (Further experimentation is essential in order to prove that it is a physiologic success.) The route followed is the shortest path between the two ureters. The technical difficulties are not excessive. It is highly probable that this method impairs the ureteric blood-supply less than any other method in vogue.

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\*Of very great interest, in connection with the problems incidental to wounded ureters or such other conditions that may tempt the operator to find a solution in a nephrectomy, is the work of Carrel, Floresco, Guthrie and others in organ-transplantation. They have most ingeniously devised and successfully executed plans by which the kidney, heart and other organs, removed from their normal site and transplanted elsewhere, have continued functionation. The three natural subdivisions of auto-transplantation, homo-transplantation and hetero-transplantation—have received consideration and experimental work is of record. This suggestive research is pregnant with possibilities for future development. For details see:

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## INDICATIONS FOR MEDICAL TREATMENT IN DISEASES OF BILIARY PASSAGES.\*

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It is realized very clearly today both by the internist and the surgeon, that the gall bladder and associated biliary tracts, like the vermiform appendix and fallopian tubes, are subject to a variety of inflammatory and pathological conditions, and that their existence indicates treatment of some kind. Furthermore, both from the intense suffering and grave danger during a biliary attack, the treatment indicated is often immediate and heroic. Upon the correct and early advice of the attending physician as to the nature of the treatment depends the comfort and often the safety of the afflicted individual.

Allowing that medical treatment, if curative, is to be preferred to an operation, which always has its attendant dangers, it is on the other hand absolutely criminal for a physician to treat recurrent attacks of disease of the gall bladder and its passages, by symptomatic and theoretic remedies until a gallstone impaction, an acute phelegmonous cholecystitis, general peritonitis, or malignant disease supervene, at which stages surgical treatment if resorted to may avail nothing.

As a means of general classification it may be said that these structures are subject to three classes of disease: 1. Inflammations. 2. Cholelithiasis. 3. Tumors; (a) benign; (b) malignant.

The profession universally acknowledges that the third of this group, if amenable to treatment at all, can be helped or cured only by operation. Of the first two, however, there still seems to be a division of opinion as to treatment, or at least many medical men are loath to yield theories long held on biliary therapeutics.

Today even with absence of results, medical treatment is quite commonly resorted to by the general practitioner: the drug or remedies being given with the hope that if gallstones, or a plug of mucus or membrane, be present, they may be advanced on through the biliary passages into the bowel, or that the gallstones may be rendered in solution. Still other remedies are used for purposes of antiseptics. The most careful experimentation and observation have failed to secure evidence pointing to solution of gallstones by the various drugs and chemicals used. And it is doubtful if more than a very slight peristalsis is set up in the walls of the bile ducts by saline and other cathartics. Of the remedies which have been used may be mentioned the alkaline waters, ether, chloroform, turpentine, olive and other oils, belladonna, salicylic acid, salol and succinate of soda.

The theories upon which the alkaline waters, such as Carlsbad,

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vichy, and the sulphate, carbonate and phosphate of soda, are administered, are many and various. One being that the bile in its normal state is alkaline and, when so, holds the cholesterin salts, the basis of gallstones, in solution, but on the reaction changing, the cholesterin crystals are precipitated and thus form calculi. Hence these alkaline waters in large quantity should, theoretically at least, by rendering the bile again alkaline, redissolve the stones. Another theory is that the amount of bile is increased by such drugs. According to many experiments, and especially those of J. Glass, as cited by H. C. Wood, and those of Dr. Brockbank, quoted by Mayo Robson, there is no evidence that any such changes occur. The purpose, however, which these waters do serve, as does pure water of any kind, is to render, from the large quantity introduced into stomach and bowels, a less inflamed condition of the mucous membrane, and thus indirectly effect the lining of the biliary passages. In addition they increase the fluidity of the whole circulatory system which effects the blood vessels of the biliary tissues in just the same manner as they effect the blood vessels of other tissues of the body. But even with such results the calculi are not forced on from the ducts, nor are they by such means rendered solvent.

Ether, chloroform and turpentine, when given in safe doses, are afterward found in such small quantities in the gall bladder that they possess no power to dissolve gallstones. Salicylic acid and salol, so far as they render antiseptic the duodenum, to that extent lessen the further invasion of bacteria into the bile passages. But they do not of themselves, as antiseptics, act upon or destroy bacteria in the gall bladder and its ducts.

Belladonna and its alkaloid, atropine, possess the property of overcoming muscular spasm which exists in all colic, but the amount of relaxation, (muscular) occurring in the fibers of the bile passages at such a time does not produce the onward passage of any stone there held.

Olive oil is quite frequently resorted to by both physician and laity, with the firm belief that it possesses the power of dissolving gallstones in the gall bladder and its ducts. It is admitted that gallstones placed in pure olive oil or cottonseed oil, without the body, undergo solution to a greater or less extent. But neither chemical results nor the physiology of fat digestion and assimilation indicate any reason for their use in biliary disease. Oils are digested and absorbed as fat, or as glycerine and fatty acids, by the lacteals of the lymphatic system and carried to the thoracic duct, whence they pass on to the pulmonary circulation and are distributed to the different tissues and organs of the whole body. This is a physiological fact, and on investigation no concentration of fat is found in the biliary structures after the ingestion of large quantities of oil. Chaffaud who

experimented upon the lower animals by introducing oil into their stomachs, was unable to detect a trace of it afterwards in gall bladder or bile ducts. In the hands of Osler, and many other clinicians, whose experience covers many cases, its use has been barren of results.

Knowing that certain types of individuals are more prone to gall bladder trouble than others, prophylaxis should be urged, especially among dyspeptics and childbearing women. This should include a mixed and restricted diet, containing little fat and carbohydrates, though plenty of proteid, and an abundance of plain or alkaline water. Further, there should be freedom at all times of any pressure or constriction over the liver, gall bladder or stomach regions. And exercise such as gymnastics, special calisthenics, horseback riding and swimming, should be freely indulged in.

During an attack of biliary colic, symptoms, especially the pain, must receive attention. Hot fomentations locally applied, with hypodermics of morphine and atropine are probably indicated above other remedies. At times ether and chloroform by inhalation or by the mouth seem to give better relief.

My own experience, in several cases of recurrent attacks of gall bladder disease, some of which have had a history dating back fifteen or twenty years, is that medical treatment is not curative, and cannot be proven to be even palliative. But, further, it only prolongs a forlorn hope in the afflicted, while rendering their condition more and more dangerous from possible if not probable suppuration or malignancy while not infrequently a mental condition supervenes as hypochondriasis or even insanity.

Hence from the standpoint of internist or surgeon, the only treatment to be advocated, on recognizing the existence of biliary disease, beyond the acute catarrhal type, is one of the surgical intervention. Thus, and thus only, can a cure be expected, and can the many unfortunate and often fatal sequelæ be avoided.

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A METHOD OF RADICAL RELIEF OF CASES OF DEAFNESS LONG ABANDONED AS HOPELESS; ILLUSTRATED BY REPORTS FROM ACTUAL PRACTICE.\*

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(Continued from page 617, April 1907.)

*More Than Twenty Years.*—This lady, thirty-three years of age, had been deaf from childhood, one of her most remote recollections being that of having been told when a little girl, by her teacher, "that she didn't hear well, and that she ought to go and get her ears fixed by a doctor!" She, however, became fully aware of this infirmity as early as when twelve years of age; and she noticed that this gradually grew worse.

With either ear, she could hear a very loud voice at about twelve feet, and loud whisper at about one foot distance. The forty-eight-inch watch was inaudible by air-conduction.

Tested by air-conduction for the separate tones of the five octaves comprising the human voice, and the two octaves just below this, the variations showed, that the lowest octave was inaudible to both ears. The next octave was heard by the right ear, its upper part only being heard by the left. The duration of hearing in the right ear, however, for this, was reduced to 50% of the normal. And the defect was marked all along the natural auditory scale.

Although popular indications pointed to this as a probable so-called mixed or complex case of fixation of the auditory conducting mechanism, with impairment of nerve function—apparently an ordinary and hopeless case of middle-ear sclerosis—our own new test offered hope of appreciable relief; so operation was proposed; and the proposition being favorably accepted, the operation was done, first, upon the left ear, and, then, four weeks later, upon the right.

Twenty days after the operation upon the left ear, a repetition of the former test showed that the second octave, hitherto inaudible to this ear, was now heard by it for about 82% of the normal; the third octave, a gain of 27%; the fourth octave, a gain of 10%; the fifth octave, a gain of 35%; the sixth octave, a gain of about 6%; and for the seventh octave, or upper one of the human voice, a gain of about 3%.

The several tests made upon the other, the untouched right ear, to note any changes that might have been affected there, showed a gradual improvement; the last testing before its own operation being made about twenty-four hours after that done upon its fellow of the

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left side. It was then found, that the untouched, right ear could hear the second octave a gain of 45%; the third octave, a gain of about 20%; the fourth octave, a gain of about 20%; the fifth about as before; the sixth, a gain of about 21%; and for the seventh octave, or upper one of the human voice, a gain of about 12%. Twenty-five days after the operation upon the second, or right ear, the tests showed the hearing to be as follows:

RIGHT EAR			LEFT EAR.		
Octave.	Gain Since Last Test.	Gain Since Orig'l Test.	Octave.	Gain Since Last Test.	Gain Since Orig'l Test.
2nd.	0	45	2nd.	4	86
3rd.	10	30	3rd.	0	27
4th.	6	26	4th.	6	16
5th.	13	13	5th.	0	35
6th.	12	33	6th.	16	22
7th.	29	41	7th.	23	26

Besides these analytical tests, the hearing for all low-pitched tones, of whatever character, and of the human voice, particularly that of men, was found greatly improved. Others, as well as the patient, noticed the improvements. The noises in the head were not so distressing; the feeling of tension in the ears had been relieved; the naso-pharynx was no longer troublesome; the eye-symptoms remained entirely relieved; and hearing was still steadily improving; when, with parting advice as to a proper daily nasal toilet for the old perforated septum, the patient was permitted to return to her distant home. After a short stay there, she, went for her usual summer sojourn to "The Springs," from which she wrote me expressing her satisfaction with the results of the operation, amongst other expressions, by the following: "I want to tell you, and I know you will be as pleased as I am to hear how much everybody thinks I have improved. At home, they all noticed a marked difference in my hearing, and they tell me the same thing here.—You can rest assured I lose no opportunity of sounding your praises. You would never let me thank you for all your goodness and attention, but I am sure none of your patients appreciated more what was done for them. My nose is in fine condition, and I have had no cold since I left you, I doctor it myself, every day."

In reply to a copy of a paper containing, substantially, the above report, extending down to the time of her return home, which was sent her several months later, she wrote as follows: "Thank you very much for the report, which I find most interesting, especially your description of my own case. I have no criticism to offer. You have told it all so exactly, as it is, without addition or subtraction, that there is nothing for me to suggest.—You have my full and free permission to refer anyone to me. I shall always take pleasure in letting

others know of the benefit I have derived from your treatment. Different persons who were here last summer tell me they noticed the improvement in my hearing and want to know about you. I am sure your ears must burn sometimes—"etc.

" . . . . My eyes have had hard and constant work since I left you, but no return of the old trouble, thanks entirely to yourself."

Two years later, upon her calling at my office, I found that she could hear the Koenig's Rods 5,000 vibrations per second higher, and that the upper tone limit of hearing had been extended to a point upon the scale of the Dench-Galton Whistle, for the right ear, 1.4 and for the left 1.5, turns, higher than at any time before the operation upon her ears. Her eye and nose, were, as when last seen, and her hearing improving.

Upon her visiting me again more than six years after operation, it was found, that the lower tone limit of the right ear had been extended, and that she could readily hear the very lowest tone of the Dench tuning fork, the lowest normal tone limit. The left ear did not show this extension of range, and she was advised to get rid of a source of reflex irritation in her teeth. The eye and nose seem still as well as when she was first dismissed.

About seven years have now elapsed since the operation upon her ears.

*Twenty Years or More.*—This patient, an assistant claim agent, thirty-six years of age, consulted me one morning, for relief of sudden deafness of this only useful, — the left ear, vertigo, loud noises in both his ears, worse in "the good" or left ear, strange sound of his own voice in this ear, etc. The hearing of the right ear had been practically gone for twenty years or more; and up to the morning of my examination, his left ear had served him faithfully. There was no suspicion of luteal taint in the case. The diagnosis of acute exacerbation upon chronic catarrhal otitis media, with neurotic factors was not difficult; and as the case answered to the test above advocated,—as far as concerned the useless right ear, long abandoned as hopelessly deaf,—it was proposed, to resect the outer portion of its conducting mechanism at once, while attempting, by milder means, the relief of the other, or hitherto useful ear.

On the day before the operation, this right ear was tested with the following results: Hears: shouting noise only at several feet distant. Forty-eight-inch watch: unheard, even on pressure contact. Dench-Galton Whistle;— 1.1. Koenig's Rods; 35,000 vibrations a second. Tuning forks: C—2 (32 vibrations a second), by air-conduction—unheard; by bone-conduction, prolonged, and, placed on vertex, is heard better in the right than in the left ear. C—1 (64 V. S.) by air conduction, unheard; by bone-conduction, 30 seconds and so on.

My suggestion to the patient, that it might be as well, sometime,



to write out a few brief notes as to his own experience as an aural patient, both before and after his operation, evoked, later, the following, which I quote *verbatim*, thinking it may give a more just impression of his own estimate of the method above recommended, and adopted in his case:

"Since you operated on my right ear, I have been in such a happy state of mind, notwithstanding the fact that my left ear is in a diseased state, cannot withstand the temptation to further encroach on your valuable time, by inflicting on you this epistle, written in my humble way.

"First, I wish to express my heartfelt appreciation of the great benefit derived from the operation.

"Second; without an attempt or desire to flatter, must say candidly, that I marvel at your skill in restoring to usefulness, an organ that has been practically worthless, for a period of about twenty years.

"Third;—Thinking perhaps you desire to know them, will give, as briefly as possible, a summary of the facts in my case, as I recall them.

"Am thirty-six years of age, and from my earliest recollection have been troubled with my ears and throat, due, I presume to catarrh, which is so prevalent in this locality.

"When a mere child, I suffered greatly from ear-ache and tonsillitis. As time rolled by, the "ache" ceased, but noticed a pronounced deafness in my right ear, which condition has prevailed steadily until for the past eighteen or twenty years have depended mainly upon my left ear, which until—night, performed excellent service, permitting the pursuance of my daily avocation, social pleasures, etc., without pronounced inconvenience.

"Upon retiring, on the evening stated, noticed I could not hear so well as usual and the next morning was astonished and somewhat alarmed to learn that I could not hear the voice of my wife, advising me that it was time to arise and perform my usual chores preparatory to leaving my home for my office in this city.

"Could not understand her until she leaned over me and actually shouted. Not only was I deaf, but in addition suffered greatly from "headnoises" and an apparent fullness in both ears.

"Was greatly depressed; in fact my condition was alarming and I felt that relief of some thing must come quickly. I came at once to your office, and after a study of the case, you advised a surgical operation. . . .

"The day following the operation, you removed the gauze and I heard clearly, not only your voice, but that of my wife and others who surrounded my cot at the hospital.

"Soon after you left, an attendant brought some word from the hospital physician, and as usual, leaned over me and shouted.

"The effect was startling and I implored him to "yell" no more,

as I could now hear. He did not know what to make of it and evidently thought I was jesting.

"On the second day succeeding the operation, you ordered me home, but to stop at your office *en route*. To test the condition of the ear, you repaired to an adjourning and telephoned, I heard distinctly not only your words spoken in an ordinary tone, *but when whispered*. I so remarked to your lady attendant, standing near, and she will, doubtless, verify my statement. . . .

. . . "My hearing has improved and after you have treated the other ear, am hopeful that I may hear about as well as other mortals.

The ear upon which you operated was examined by a specialist about ten years ago, and was informed that I would never hear out of it again, as the drum-head was withered, thus effectually preventing the transmission of the sound-waves.

"In stating the above, have endeavored to give you the facts, merely as they are recalled, and will say emphatically, they are not enlarged upon or exaggerated, one iota." etc.

"Two years later, he wrote me as follows:

" . . . "My thoughts revert to that—morning—, when I arose, almost totally bereft of my hearing: . . .

"You will recall the removing of the "false drum-heads," which formed twice after the operation at the hospital; how we "stuck together" in our mutual determination to eliminate this feature of the trouble; . . . ; how you assured me, 'to have patience and stay with you,' for you were satisfied that you could eventually stop the "growths." You were right!—The "growths" was successfully killed, and my right ear, on which you operated, feels much better today than at any time *before* or *since* the trouble. You know, I complained so of headnoises, etc. The writer is practically all right in this respect; and, I can assure you, the relief is very gratifying. My left ear, still to be operated upon, vibrates, to some extent, the hearing from the right, causes a constant "ringing" and other "head noises" in left side of head. When you "do the necessary" and the operation is in any degree successful, as I have every reason to believe it will be, am satisfied my hearing will be improved greatly.

"Words are inadequate to express my gratitude for the benefit derived from your skillful treatment. Even you, as thoroughly conversant with the mechanism of the ear as you are, cannot appreciate the feelings of a "poor unfortunate" afflicted with a catarrhal affliction of the middle-ear, and what a relief to be freed from not only the deafness, but the terrible noises, *which are worse*.

"I am so thankful that you consented to operate upon me, for had you not done so, am satisfied I could not have endured the terrible agony which I suffered constantly.

"When you want to "fix" the left ear, say the word, and I am "yours."

"If you have other patients afflicted as I, and who are fearful as to the result of an operation, send them to me and I think they will "take heart," derive comfort, and have hope renewed by conversing with one who has been "through the mill," therefore capable of stating the *real* facts from *actual experience*, which beats theorizing by long odds.

Then follows indisputable evidence of the patient's satisfaction with the result of his resection—and this is too comical to withhold from intelligent *medical* brethren,—of course, *entre nous*—: "Every time I run across a deaf person, the first thing I say it: "Go see Dr. Barclay, right away, *quick!*— He is the man who can make you hear, if there remains anything in your head with which to hear."

Surely, the operation must have proved satisfactory to the patient, who, however overdemonstrative, felt impelled to tender such a huge and fragrant "bouquet," as this to his attending physician.

Operation on this patient's left ear was deferred several years on account of an unexpected nervous shock, due to the undeserved permanent rupture of his domestic relations and because of an entire change in his mode of living. Since this recent operation, on the left ear, however, the case has been still under professional supervision, for suppression of substitutive membrane tympani in this ear, which has re-formed several times. For this reason, and until this indication has been met, the detailed report upon this phase of the case is and shall be withheld.

With the ear first operated on,—the right ear, the patient has been able to hear elevated voice at twenty-five feet distance, and has had no return of his other symptoms, since the operation, which was done, upon this ear, more than five and a half years ago.

*More than Twenty Years.*—This married lady, thirty-three years of age, sought relief from purulent left-ear disease, and usual concomitant symptoms, which, she stated, had troubled her since babyhood—for more than thirty years.

Since earliest recollection, she had always been a sufferer from this.

With the affected ear, she could hear an ordinary small kitchen alarm clock at ten feet distance. All sounds, when heard, were indistinct in character.

From her own pew in church, twenty-two feet from the pulpit she could hear, and indistinctly at that, but a small part of what was said by her own pastor, with whose voice, in close conversation, she was wholly familiar. In ordinary conversation, she was frequently compelled to ask her friends to repeat remarks addressed to her.

Operation was advised and consented to.

The last visit made to me by the patient for formal report and for



personal inspection, was five months after the operation. At that time, her hearing was still improving, so that she could hear all preaching distinctly from her pew in church. In conversation she no longer had to ask her friends to repeat. The small, ordinary, kitchen, alarm clock, she could now hear from her rocking chair upstairs,—the sound having traveled all the way from the mantel piece downstairs through a doorway, twelve feet from it, then deflected to a right-angle, up a flight of twelve steps, along a landing six feet in length, again deflected to a right angle, through a side door, to her rocking chair, two or three feet away.

The noises, dizziness, headache, and discharge, which had disappeared with, or soon after, the operation, had not returned.

No return of any symptoms has been reported, although nearly nine years have now elapsed, since the time of the operation.

*About Twenty Years.*—This gentleman, thirty-one years of age, had "been more or less deaf for many years"—"It must be eighteen or twenty years," he said—"evidently from "catarrh."

"The deafness had gradually increased until," as he expressed it, "the right ear was practically deaf;" and he, "was unable to hear a conversation over the telephone in the right ear."

He was advised to submit to tympanic resection of his worse—right ear; which he promptly consented to do without delay.

Two days before operation, his hearing by the natural channels was as follows:

Right ear (the one to be operated upon): heard loud noise only, at one foot distance. A forty-eight inch watch was unheard by it, even upon pressure-contact. The Dench-Galton Whistle was heard at 1.1—and the upper tone limit for Koenig's Rods was found to be 5,000 vibrations a second below the normal. The duration of hearing by the natural channel, taken from Dench's and Hartmann's Tuning forks, may be presented as follows:

The two lowest octaves were inaudible. The lower tones of the third octave, or the lowest of the human voice, were heard about 18% of the normal. Lowest tones of the fourth octave about 37%. And so on.

The left, or untouched ear, before the operation on its fellow of the opposite side could hear, by the natural channel, ordinary voice and ordinary whisper at one foot distance. A forty-eight inch watch was unheard by this ear also even on pressure contact. The Dench-Galton Whistle was heard at 1.1; and the upper tone limit of Koenig's rods was found to be 5,000 vibrations a second below normal. The duration of hearing by the natural channel, taken with Dench's and Hartmann's tuning forks, may be presented as follows:

The two lowest octaves were inaudible. The lower tones of the third octave, or lowest of the human voice, were heard about 34%. Lowest tones of the fourth octave, about 37%, and so on.

Such was the state of the hearing two days before tympanic resection of the right ear.

The operation was begun under Chloroform anesthesia; and finished with cocaine hydrochlorate solution, locally,—the patient maintaining conversation throughout the local anaesthesia. In the course of the operation, immediately after the division of the incudo-stapedial joint, others in the operating room remarked that the patient himself spoke in a markedly louder voice.

Upon the second day after the operation, he could, with the ear that had been operated on, hear the forty-eight inch watch at one-half inch; upon the third day at three-quarter-inch distance; while, with the undisturbed ear, upon the corresponding days, he could hear the watch upon contact, and at one-quarter inch distance; this watch, before operation upon the right ear, being inaudible to both ears, even on pressure contact. Upon the third day after the operation, the patient's uncle volunteered the opinion that the patient heard much better and spoke louder than usual. Shortly after the operation, he discovered that he could hear more distinctly the rumbling and gongs of neighboring streetcars. On the eighth day after operation, it was found that he could already hear with the operated ear, a somewhat elevated voice at thirteen feet; whereas, before operation, he could hear a loud voice only at one foot distance. The Dench-Galton Whistle was now heard with the operated ear, 0.2 higher than before the operation, a trifle above the average normal limit. The range of hearing for Koenig's rods had been elevated 5,000 vibrations a second, clear to the normal. With the Dench's and Hartmann's tuning forks, it was found, that this ear could now hear as low as the middle of the very lowest octave. All of the second octave was now audible in 54 per cent. of normal reaction. Before the operation, these two octaves were entirely unheard by this ear. The lower tones of the third octave, or lowest of the human voice, there was a gain of hearing of 29 per cent. For the lower tones of the fourth octave, there was a gain of 8 per cent. For the fifth octave, a gain of eight per cent. For the sixth, a gain of 23 per cent.; and for the seventh, or upper octave of the human voice, a gain of 26 per cent.: as it was found a trifle more sensitive than the average normal at this pitch.

Upon the thirteenth day after the operation upon the right ear, the left one was tested as before, when it was found that a slightly elevated voice was heard at thirteen feet by it, somewhat better than by the right ear. The forty-eight-inch watch, inaudible by both ears before the operation was now heard by this ear at a distance of one-half-inch. The Dench-Galton whistle, which upon the fifth day after the operation had been heard considerably above the average normal 0.2 higher than with the operated ear, was now heard at the normal. The upper tone limit of hearing for Koenig's rods, however, had remained unchanged at 5,000 vibrations a second below the average

normal. Tests with the Dench's and Hartmann's Tuning forks showed that this ear could now hear down in the second octave, altogether inaudible before the operation at 41 per cent. of the normal; and for the seventh, or highest octave of the human voice, a gain of 9 per cent was found.

The improvement in this patient's hearing has been reported to me as remarkable by a number of his friends.

This report, demonstrating, by the results of these ordinary objective testing methods, the relief afforded, may seem the more nearly complete, if closed with an extract from a statement made by the patient himself, as a summary of his own impressions as to the results of the operation in his own case; he says:

"As you are aware, I have been more or less deaf for many years, the exact number, I cannot state, but it must be eighteen or twenty years. This deafness, supposed to be the result of catarrh, had gradually increased until the right ear was practically deaf. The operation which you performed upon this ear some weeks ago, in which the drum-head was removed, has increased the bearing of the right ear very materially."

"For example, before the operation, I was unable to hear a conversation over the telephone in the right ear, whereas I can now hear over the telephone practically as well in the right ear as in the left."

"The operation, while, of course, not restoring my normal hearing, has been a success in every sense of the word. My friends, without exception, notice the material improvement in my hearing since the operation."

The following incident will give an approximately definite idea of the improvement which had been made in his hearing; several years later, one evening, shortly after nightfall, I found myself, unexpectedly, walking just behind this patient and a male companion, with whom he was conversing. Although, the surroundings were quiet, I walked more than three-quarters of a block, thus, without being able to catch any part of the conversation between them.

Four and one-half years after operation, the ear, on inspection, was found as the operation had left it; and the hearing for conversational voice had markedly improved.

More than six years have now elapsed since this gentleman's ear was operated upon.

*About Thirty Years.*—This patient, a locomotive engineer, middle-aged, who responded to our new test, and submitted to operation, as advised above, gives the following account of his own case:

"I have been troubled with a discharge in my right ear for about thirty years; the discharge, at all times, being very offensive, and seemed to run more at night than in day-time. I remember, when a child, of having my ear syringed by my mother. But this never gave me any relief, as my ear would continue to discharge, regardless



of all the attention given it. I had never been able to hear a sound of any kind from my right ear, and was often troubled with a ringing sound accompanied by dizziness, when I would have to take hold of a post or anything for support, until that feeling would pass away, which would last about 30 seconds."

As regards the effects of the operation upon his hearing and other symptoms, he wrote me:

"There is no more discharge in my ear. I can hear plainly; and can hear as plainly as anyone through a telephone. I can even hear a whisper or a watch-tick in my right ear."

No adverse report has since been sent in, notwithstanding that four years have now passed since the time of operation.

*Twenty-five Years or More.*—This lady, fifty-six years of age, the wife of a regular physician in general practice, came to consult me, in company with her husband, who, before leaving his home, wrote me regarding her case, in part, as follows:—

"The matter is a very important one, because, if my wife does not get relief, I have fears for her continued sanity."

"My wife, aged fifty-six years, suffers from tinnitus aurium, partial deafness,—especially the left ear.—occasional vertigo—this latter always temporary—hears fairly well in a crowd or amidst other noises than that of conversation."

*History of cases:* Had scarlet fever at sixteen years of age. Sequelae—suppuration of left ear, with a purulent discharge that lasted two years—at the end of this time, so far as she knows, her recovery was complete—hearing remaining good until thirty-five years of age, when a slight discharge from her *left* ear appeared, through a small opening in the tympanum. She dates the subjective noises from this period and also the dullness of hearing. I took her to an aurist, who diagnosed "Catarrhal inflammation of the Middle Ear." This man practiced Politzerization, etc. The subjective noises have slowly increased, together with occasional, slight and short attacks of vertigo; until now, at fifty-six years, she can only hear ordinary conversation with left ear at 10 inches—with occasional lapses when she cannot hear at all.

Hearing in her *right* ear began to be dull at forty-five, but subjective noises in this ear, she thinks were not noticed until fifty-four years old, she now hears common conversation with right ear at four (4) feet. Claims she cannot hear a watch at all, with either ear. Hears an ordinary eight-day-pendulum clock at one foot, with right ear; but not at all with left ear. The opening in left tympanum found, when thirty-five, healed up. Both membrani tympani are in place, but present a thickened and sclerosed appearance. Last October I consulted Dr. \_\_\_\_\_\* of your city,\* who examined her ears. His diagnosis was expressed by one word—"Sclerosis!"

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\*A prominent otologist!—R. D.

He treated her for two weeks by passing into each Eustachian tube a few drops of Philocarpine solution, and used the ear messeur one and one-half minutes to each ear. On his advice, I purchased a messeur instrument and have used it carefully a portion of the time ever since. Still, I can see no striking results. Possibly the matter might otherwise have been worse," and so on.

The patient was first examined by me just one year after having received her treatment at the hands of my local fellow-otologists, and could hear the Koenig's rods to 40,000 vibrations a second—with either ear. Tuning-forks tests, gave the following results: Right ear: C—<sup>2</sup> (32 v. s.) AC unheard; C—<sup>1</sup> (64 v. s.); Right Ear, by Air-Conduction, 6; by Bone-Conduction, 19; and so on.

Left Ear: C<sup>2</sup> (32 v. s.), AC, unheard. C<sup>1</sup> (64 v. s.) AC, unheard; B.C., 15; C. (128 v. s.), A.C., hearing doubtful, uncertain; B.C., 42; C.<sup>1</sup> (p56 v. s.) A.C., 8; B. C., 16; and so on.

Amongst other causes of reflex aural irritation, there is considerable irritation with the teeth, especially a number of devitalized or "dead" teeth, which she was forthwith advised to have removed, and promised to do so later,—but, let me say—up to the last reports she was still postponing this part of her duty in the management of her case after my judgment.

Although the case was, evidently, one of so-called "sclerosis" with neurotic factors and reflex irritation; yet from the fact that she responded somewhat to the test proposed above, tympani resection of the left ear was recommended, and the patient agreeing to get rid of her dental irritation thereafter, as I might advise, the operation was readily done.

At my suggestion, her husband, the Doctor, made notes of the effect of the operation upon her hearing, etc.; and I shall take the liberty of quoting from them, as follows:—

(Day after operation) "Heard Dr. B's questions in left ear."

(Second day after operation.) "Heard street noises, such as wagons passing."

(Third day after operation, heard Dr. B's questions with left ear, right ear being closed.) "Same day heard the "Chuff! Chuff!" of an automobile, which really awakened her from sleep."

(Fourth day after operation.) "Heard bells on streetcars."

(Eight day after operation.) "Heard footsteps in room overhead, and the ringing horse foot-steps on pavement which she described as "metallic."

(Ninth day after operation) "When walking in the street complained of "screeching" sound of the slipping of the car wheel, when the cars were being braked for the stops."

At six p. m.; heard the clock strike on the other side of the room—distance 20 feet. Same evening, heard a small dog bark, in the street, she being in her room on the second story. At eight p. m.,

heard an ordinary watch ticking when pressed against right ear—the first time for *two years, etc.*

Her hearing continued to improve, and I urged her to give attention to her dental irritation at once, and before her departure for her distant home; but failed to induce her to do so. Upon her departure, she was urged to attend to this at once, as conservative of hearing. Upon the day she was last seen, I found that, with the “resected” ear, she could hear by air-conduction, the entire range of the normal auditory scale, as far down as just below the C-2 (32 v.s.) tuning-fork.

Her husband, the Doctor, later wrote me, in part, as follows: “Mrs. ————has steadily improved in most respects; whereas, for a period of more than two years, she had not slept on an average of more than four hours out of the day, she has slept from eight to twelve hours out of every twenty-four, ever since the night following the ossiclectomy. She is calm and reasonable; and takes an interest in the affairs of life. I send you a card with diagram of the size of opening in the drum-membrane of her left ear. She asserts that she does not hear as well as she did up to three weeks after the operation. She admits that she is absolutely free from the subjective noises, save, that when she becomes fatigued, a small bell-like ringing occurs in her *right* ear. Etc

As yet, there has been no report of the formation of a complete substitutive membrane at the site of the original membrane tympani.

I have since written once, urging them earnestly, to get rid of the reflex irritation, of dental disease, devitalized teeth, etc., for the sake of the ears and hearing; but have not heard, as yet, whether or not my advice has been followed.

*More Than Twenty-one Years.*—This lady, a professional pianist and music teacher consulted me for disease of the left ear, with which, she stated, she had been afflicted since childhood—for more than twenty-one years.

The roaring noises in this ear not only caused much distress but contributed further to deafen her until this deafness had grown so marked that she could not distinguish speech through a Bell-telephone. Frequently, she was obliged to pay the closest attention in order to understand the peculiar voice of certain speakers; and appreciation of delicate qualities of tones was, oft-times, a trying task to her. Not the least annoying of her symptoms was an intolerable itching in the affected ear. A discharge from this ear she had succeeded in keeping free of feter, under methods of treatment advised by several competent physicians—one of them, one of our best known ear and eye specialists—at whose hands she had taken treatment.

Operation was advised and consented to.

The last call made by the patient for formal report and inspection was six months after the operation; when it was found, that she



was still free of the roaring noise, itching, discharge, and deafness—her hearing, in the affected ear, for the voice and whisper, appearing normal; while she now had no difficulty whatever in hearing an ordinary whisper through the Bell-telephone.

In every respect the results of the operation have been pronounced wholly satisfactory; and at an occasional meeting, she states the ear and the hearing are still at their best.

More than seven years have now elapsed since the operation on this patient's ear.

*More Than Eighteen Years.*—This man, a mechanic, of German parentage, and about 42 years of age, after having submitted to a course of palliative treatment for left chronic purulent otitis media, until it was evident that no further relief was probably therefrom: consented to submit to tympanic resection. About four weeks after the operation, the patient described his own condition, as follows:

"Deafness of more than eighteen years, due to an abscess of the left ear, which caused me much trouble. Have been to many physicians before, but had no relief until I went through a course of treatment by Dr. R. Barclay; and finally an operation was advised and consented to. For ten years before this operation and treatment, I was, at times, so dizzy that I had no rest, day or night. (Tested). three weeks after the operation, I can hear somewhat better and my dizzy feeling has left me. I can now hear a clock tick from one side of the room to the other, which I could not hear before, except close to the ear."

This patient's hearing subsequently has remained excellent: and there has been no recurrence of his symptoms, although about four years have now elapsed since the time of his operation.

*Many Years, Number Uncertain.*—This man, a railway conductor, about forty-four years of age, fearing that he was about to be dismissed from the service because of very great and gradually increasing deafness, consulted me, giving the usual history of chronic catarrhal otitis media. Medicinal treatment proved of no avail. Answering, in some degree, the test herein proposed, this man was advised to submit to tympanic resection of his worse ear, as a reasonable last resort against total disability from deafness. He consented thereto; and the operation was done.

Within four hours afterwards, the hearing upon the *opposite* side had been so remarkably improved by the operation that the tick of a watch was heard, which had previously been inaudible for about six months.

Later, he wrote me, in part, as follows: "About one week after operation, our little canary bird singing would annoy me at a distance of forty or fifty feet. My wife remarked that my ears were certainly improved, if I could hear the bird so plainly, as it was downstairs, hanging in the kitchen window, and I was upstairs." Previous to

the operation, he said, the singing of the bird was rarely noticed by him, even when hanging nearly in the same room with him.

"On the eleventh day, I took a trip on the train. I was riding in the fifth car from the engine, and could hear the engine whistle very plainly. They sounded plainer than for months before. I was talking to the conductor of the train on this trip, and he remarked that I could hear better; and he claimed he was talking in a very moderate tone while talking to me."

Some of this man's immediate family and friends have expressed to me, personally, their pleasure at his improved hearing.

He is still hard at it, at his post; and will probably be spared thus for many years' service which otherwise would have been lost to his Company and family.

Three years have now elapsed since the time of his operation.

*More Than Nineteen Years.*—A man, aged thirty-seven years, formerly a traveling salesman, but latterly employed as a streetrailway conductor consulted me respecting the possibility of securing, through an aural operation, radical relief of dulness of hearing, severe pains in the head, vertigo, and ear discharge, which was, itself, not only very fetid, but had rendered his breath also offensive, much to his embarrassment and mortification, socially, as well as commercially. He had been led to consult me the more willingly, from the fact, that a prominent physician of this city had kindly taken an interest in his case, so far as to inform him, that the operation of tympanic resection, advocated by me in conditions specified above, was designed to relieve, not only ear discharge, vertigo, headache and other active symptoms, but deafness, as well—a blessing for which he had long since ceased to hope. However, the former symptoms of which he complained—dulness and severe pains in the head, vertigo, fetid discharge, and offensive breath,—had become so annoying, as, finally, to demand attention. Right here, it might be as well to state, that his disability had prevented his continuing the pursuit of his calling as a salesman; his going into business for himself, as intended; his promotion to the more lucrative position of inspector on his read; and his financial success, because of prolonged expense and occasional absence from business attendant upon the intercurrent exacerbation of his disease.

Examination of his right ear showed the destructive effects of suppurative crisis media, which had continued in spite of treatment, for over nineteen years, and which had been brought on, originally, in boyhood, by swimming and diving.

The operation of tympanic resection, recommended by me, was consented, to; and he was operated on thus, on the third day afterwards.

Excepting a trifling amount, on the ninth day, there has been no discharge whatever, from the ear, since the fifth day after the operation; and his headache, vertigo, fetor, etc., disappeared at once.

The previous condition of his hearing and the effect of the operation upon it, can perhaps be most appreciated through the following, of the patient's own statements:

(Before the operation.) "I could not distinguish a word spoken in my right ear."

(On the fourth day after the operation.) "At the present time, I can hear a whisper; and can hear common conversation in an adjoining room."

(On the seventh day after operation.) "I can talk," (he means "hear") "through the telephone with the operated ear."

(Shortly after the operation, he returned to work; and on the thirty-ninth day after it, stated of the operation): "I can say, that it was beyond my expectations; for my hearing is so good, that it is annoying at times. People talking to me, at times seems as if they were shouting, and the noise of a streetcar is almost deafening."

"I do not have headache at all.

"Before the operation, in a convention, I was always saying 'what?' because I did not hear; and now, I find it nothing but a habit, for I can hear as good as any one. I took me some time to get used to the sound; for it seemed strange to me to hear noises that I never heard before. It has been a great help to me in my work; for I have to answer a great many questions, and from all classes of people; and I find that my hearing gets better all the time."

I have seen him occasionally since the operation, and he declares himself entirely pleased with the results of the operation which was done over fifteen months ago.

*More Than Thirty-four Years.*—This patient, thirty-six years of age, had suffered for more than thirty-four years with intermittent chronic purulent otitis media of the left side. By medicinal treatment he was relieved of his discharge, sometimes, for months, or even more than a year at one time. Finally about nine or ten years ago, a resection operation was done upon the affected ear, the remains of a drum-head malleus being removed, no incus being found.

Cessation of the discharge followed within a reasonable time after the operation, and did not annoy him again until a long time after: when, after careless exposure to a fearful blizzard, his old trouble returned; and persisted, in spite of the very best medicinal treatment. His attendant, one of our most eminent eastern otologists then recommended a mastoid exenteration operation. But his duties, calling him across the Atlantic, he then placed himself under a leading continental otologist. After medicinal treatment, for awhile, which failed to relieve him, this specialist also recommended the mastoid exenteration operation.

His aural and temporal neuralgia, at times, was so intense, as nearly to drive him "distracted," so he forthwith returned to this country, but hesitated about submitting to the operation as previous-



ly advised by these two gentlemen, without first visiting his home relatives. While on this trip, he consulted me when, a careful exploration of the parts revealed, lying on the scute of the tympaniætic, at the entrance to the mastoid antrum, the hitherto inaccessible *incus*, which was forthwith removed with a curved hook. This was followed by a gradual cessation of the intense shooting pains through the ear and head; gradual retardation of the aural suppuration; and an enormous increase of hearing power, a forty-eight inch watch being audible in this ear, at three to six inches distance, at times; and a whisper now being heard with it at more than twenty-five feet.

The *incus* was removed, in this case, about eighteen months ago.

Suffice it to say, in summing up, that the one practical lesson of this essay and of my own experience, that I trust you will carry away with you is this:

*Clinical experience seems to have confirmed the opinion, that in cases of deafness, long abandoned as hopeless, habitual speaking in an abnormally moderated or low tone of voice, associated with better hearing in a noise or noisy place, is an evidence of an immobilization of the outer portion of the auditory conducting mechanism; and, in such cases, is an indication for the employment of surgical measures for its radical relief, and also, that resection, that resection of the auditory conducting mechanism, properly done, will radically relieve deafness—no matter of how long standing, nor however treated hitherto—proportionally to the distinctness of the following characteristic symptoms, when found together, namely: habitual speech in an abnormally moderated or low tone of voice, with better hearing in a noise, or noisy place,—which, it is herein claimed, are pathognomonic of immobilization of the outer portion of the auditory conducting mechanism.*

Before closing, the writer would modestly express the hope, that this paper may serve to direct the attention of some hearer—one more professional brother—to the resection of the auditory conducting mechanism as a rational method of radical relief for certain hopeless cases of deafness,—with or without discharge from the ear,—whose merits, certainly entitle it to more careful and studious consideration than it appears hitherto to have been accorded by the medical profession generally.

In conclusion, allow me to repeat:

“A moments reflection, however, will serve to show, how irrational it is to condemn a potent agent, such as this, as harmful or useless, simply because of results, however lamentable or disappointing in themselves, arising from the indiscriminate or inappropriate employment of such agent. Particularly, since propriety and reason lies not only in its application, but in its proper application. And where, occasionally, we meet with marked instances of the undoubtedly advantageous application of a remedy, obviously so beneficial as this one, failure or disappointment should not strengthen our determination to perfect the search for the exact indications for its employment;” which as far as known, I have tried to state and to explain to you.

## THE PHYSICIAN A DEBTOR TO THE ORGANIZED PROFESSION.\*

BY ALFRED R. ROWE, M. D., POPLAR BLUFF, MO.

The particular ground which this paper is intended to cover has many times been more fully and more ably discussed. My reasons for again presenting it are, first, its importance; second, that only by repetition can any truth, no matter how vital, attract its due share of attention.

The trend of the times, yes, we may say the trend of all times, is and has been towards organization. The primitive man for self-protection against wild beasts and enemies, banded together in tribes or clans. From this beginning our present civilization has grown. And the reason for our higher form of organization now as then is protection. Charles Mercier in his article in Albutt's System of Medicine on "Vice, Crime and Insanity," lays down this fundamental truth: "the existence of a community, an aggregate of any kind, implies and involves the surrender upon the part of the individuals who compose the aggregate, of a part of their freedom of action." also this truth: "Wrong-doing is the sacrifice of others to self." Thus a man conducting a business is freer to act than if he was in partnership with others for in partnership his freedom of action as regards the business is necessarily limited. Now if, by some independent or underhand action, one partner gains entire control we have an illustration of our second truth—wrong-doing the sacrifice of others to self. If in the walk of life mine and another's paths conflict then necessarily if no wrong be done there must be a mutual giving up, or sacrifice. On these basic truths or principles all organizations are based, no matter how primitive, or to what degree of perfection the development. They imply that there is a sacrifice to be made and a benefit to be gained, and further, that the benefit gained is greater than the sacrifice made.

It is my purpose in this paper to show briefly, first, the need of organization in our profession; second, how the present organization fulfills that need, to some degree the benefits resulting from its labors; third, that the individual physician as a participator of these benefits, is a debtor, and as such what the nature of his payment should be.

We need an organization for protection as a profession. We are in the habit of looking upon our profession as the noblest profession. Many are the opportunities for noble action that our chosen vocation gives us. But let us look at it from a layman's standpoint. His view of the medical profession is much broader than ours and includes the various advertising quacks, magnetic healers, osteopaths, and

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\*Read before the Butler County Medical Society, February 22, 1907.

others who profess to treat and cure disease. In this broad view are classed the honest and the dishonest, the gold and the alloy, the noblest and the basest. Here, without going further, we see the need of protection by the profession, as a whole.

Among men associated together in the same line of work, contention will arise, and paths will cross. Freedom of action must be limited, sacrifice by each must be made, else wrong to the individual will be done. Especially is this true of the professions, and that of medicine is no exception to the rule. So here we see the need of protection by the profession as individuals.

Progress in our profession more than in any other is dependent upon individual work being brought together and compared. In other words we as individuals are dependent one on the other for the results we accomplish. He who in his self complacency cares not to learn from others, but considers that he is self sufficient, will surely not advance, but retrograde. Hence we see the need of protection by the physician as against himself.

Having a need for protection we have our organization to fulfill that need. Our medical association was started with a selfish motive in view—that of self-protection. However much we would like to look upon it as having had a more noble incentive, we must acknowledge that it had for its object first and foremost, self. Not so has its object continued. Just as the art of healing, which in ancient times, was practiced by slaves, has gradually raised its standard of education necessary to practice intelligently and attracted to the study of its mysteries the brightest and most learned, so our organization has grown beyond self into an ever widening field of usefulness. Society as a whole partakes with the medical fraternity of the benefits conferred. We can point to its work with pride. Sanitary conditions where before were filth and disease; fewer and less fatal epidemics; many diseases robbed of their terror; cleaner food; purer water; many such results which would have been impossible to accomplish without great study and concerted movement. One of the greatest benefits to society as a whole is the exposure of the danger of patent medicines which has now been taken up by the lay-press. Again, our organization furnishes the laity with a means of distinguishing between a physician and a quack, between the honest practitioner, and men who have lost all conscience and will promise whatever the patient wants promised, no matter how impossible of fulfillment.

There are many benefits resulting from our existing organization, too numerous to mention. Among the many the social feature is not the least. Many a firm friend and true ally will be found among those who, before we knew them were looked upon with a feeling of antagonism. Many seeming discourtesies will be found to be the result of a misunderstanding and professional jealousy, which, while it



benefits no one degrades the profession, can be made a thing of the past by this same social feature. We will find when we get acquainted with others of our profession, that their friendship is well worth cultivating and will be surprised that we did not find it out before.

So the physician of today looks about him and sees the need of protection and in the medical organization he sees that need supplied. In looking into its working he sees that mutual sacrifices of the individuals tend to form the perfected whole, eliminating to a great extent the sacrifice of the many for the few. He sees in contrast to the sacrifice made, the benefits gained; these as we have pointed out are not confined to the medical fraternity alone but are shared with society.

Each physician owes a duty to the organized profession. First as a physician who is enjoying the result of its work for the profession. Second as a citizen who is enjoying the result of its work and whose position in society is such that he is eligible to share in its labors. Duty implies debt. Voluntary service, charitable work, is a gift, a free gift. When we speak of our duty we necessarily imply that we are in debt. Speaking of the duty of a child to its parents brings to mind the debt of love and care the child owes. The foreigner living in this country and enjoying its freedom and prosperity owes his adopted country a debt. So the physician, enjoying the benefit procured for him by the work of the County Society, the State Association and the American Medical Association, is just as surely a debtor.

The first duty he must pay is to acknowledge the debt by becoming a member of his County Society and thus approve and endorse the general movement of the organized profession. By so doing he signifies his intention to deal honestly with his fellow-man and fellow-practitioner. He shows that he has some concern as to his standing in his chosen profession and also the standing of his profession among others. Having then made his first step in the path of duty by acknowledging his debt, his next step should be taken. That is to maintain his membership, keeping himself in good standing, paying his part of the expenses in full and when due. What is worth joining is surely worth supporting. Next he should be present at the meetings of the society whenever possible. This means that his absence should be the exception, not the rule. For having now become an integral part of the organized body the business of the society is his business and no one can attend to his business as well as he himself. To do this properly requires regular attendance. In all societies we have active and passive members. Be an active one. Unless we are of the active class we have no right in the medical profession. Our society needs her active members active in her behalf and if we deem our membership as of value, why should we not supply her need. Much has been done—we are the gainers thereby—more is to be done—let us not be classed among the drones. Let us by our activity pay the debt we owe by making those who come after us in this noble profession greater debtors even than we to the medical fraternity.

## AN INTERESTING CASE OF CONGENITAL DEFORMITY.\*

BY GORDON A. BEEDLE, M. D., KANSAS CITY, MO.

In presenting this case for examination and discussion I do so not with the intention of embracing a paper covering the broad field of deformities and monstrosities of the fetus, but rather to limit this short report to that certain type of anomalies of growth to which I believe this case belongs.

Clemot Brewer, born June 18, 1905—Presenting deformities consisting of absence of left leg from about two inches below the knee joint. Right foot, equinovarus with absence of toes. No markings or irregularities in any other respect on body. Absolutely normal in every other respect with the exception of being unnaturally bright for his age. Being sixteen months old to date, commenced sitting alone at three months of age and has been talking for the last three months. Mother and father both healthy. Mother's age twenty-five years. Gave birth to normal healthy baby three years ago, at which I delivered her at Kansas City; her father and mother both living and healthy. Husband's parents both living and well; no tuberculosis or syphilis in family. History of normal gestation, with exception of during last three months, when symptoms occasionally occurred and described by patient as sudden cramps of right hip. Baby was born in Trenton, Missouri, and delivered before the attending physician arrived.

The variety known as club foot is not so uncommon but when associated with an absence of toes on the same foot and with the opposite limb presenting the appearance of an amputation of the leg at the upper third, the interest in the case from the standpoint of the etiology, or pathology, increases materially. The theory of muscular retraction as the result of some alteration in the central nervous system, could possibly be applied here had it been simply a club foot with no other deformity, but could hardly be applied to an absent leg or foot. The cause of the one deformity is evidently the cause of both as the absence of the toes on the club foot would indicate.

Of the little I have been able to learn from research, the theory of compression, either from uterine muscles associated with scant amount of amniotic fluid, or adhesions, seems the most plausible for this type of fetal deformity. In general the fetal position of the feet for the first three months is that of varus. If such a condition, causing mechanical pressure, existed in its primitive state, with possibly adhesions forming in such a way as to block the progressive growth of one limb, such a result as we have here would not be impossible.

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\*Presented at the meeting of Jackson County Medical Society, October 13, 1906.

## THE RELATION OF PELVIC DISEASES TO INSANITY.\*

BY N. F. TERRY, M. D., SPRINGFIELD, MO.

It has long seemed a settled fact that an intimate relation exists between the female pelvic organs, particularly the uterus and its appendages, and certain mental states designated under various titles. These are hysteria, hystero-neuroses, genito-reflex nervous disturbances and sympathetic insanity. While there are numerous instances of mental symptoms, due to certain obscure conditions of these organs, without the signs of organic disease, it is here proposed to consider only those conditions in which definite organic disease exists.

It is now considered that organic disease of the uterus, when it results in mental disturbances, is not sympathetic but, like diseases of other important organs, by pain and interference with proper nutrition and by long continued drain, results in faulty nutrition of the cerebral centers, thereby producing a condition of cerebral anemia. This condition, with a predisposition already existing, is a sufficient cause for insanity. The literature of the subject is voluminous, yet the more important contributions have been made within the last forty years. Meyer of Berlin was among the early writers in a paper entitled "Relations of Morbid Conditions of the Sexual Organs to Psychology." Fordyce Barker discusses the subject in his work entitled "Uterine Diseases as an Exciting Cause of Insanity," Hergt of Heidelberg, in 1870, had something to say about "Woman's Diseases and Disturbances of the Mind." Skene, in 1880, who studied this subject in Kings County Insane Asylum concluded that diseases of the pelvic organs are rarely the cause *per se* of insanity; that the irritation and exhaustion produced by uterine and ovarian disease is a predisposing indirect cause, and only in those who are already of a poor mental balance. Manton, of Detroit, is considered the pioneer in this country in extensive surgical study of pelvic diseases in the insane. Through his writings, and others of perhaps equal influence, the opposition to surgical operations in insane asylums has given place to toleration and encouragement where pathological conditions are known to exist. That there is a sentiment in favor of the recognition of surgical disease is shown by Noble, of Atlanta, who, in 1900, addressed a letter to all the asylums of the United States and Canada. Those who expressed an opinion believed that pelvic diseases are exciting and contributory to insanity when they affect the general health of patients who are predisposed to such mental state. At the present time a small per cent. of institutions recognize the necessity of the treatment of pelvic disease in the insane. In a few of the larger institutions gynecologists have been added to the

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\*Read before Greene County Medical Society, February 22, 1907.



medical staff and well equipped operating rooms are provided. In our own state, if information is correct, no systematic provision is made for the management of these cases; largely the fault of the management perhaps.

That a large per cent. of insane women have some form of pelvic disease seems to be certain. Ripping states that in the asylums in Germany 33 per cent. have pelvic diseases, as shown by autopsies. Hergt speaks of 66 per cent. Various reports from asylums in the United States gives 60 per cent to 93 per cent. It is not to be inferred from these figures that insanity is a form of pelvic disease, or that surgical operations are necessary in very many cases. It is reasonable to believe, however, and the facts seem to warrant the conclusion, that a considerable per cent. of these cases have definite pathologic lesions, often grave in character, which entail great suffering and danger to life, and in addition are a causative factor of the morbid mental state. Brown, of the Manhattan State Hospital for the Insane, in order to induce conservatism, recommends surgical operations where indicated without the object of influencing the mental condition. In this way, operations of doubtful utility are avoided. These include major operations, abdominal section for the removal of conditions endangering life, operations for displacements, repair of cervical and perineal lacerations and endometritis.

It has been observed that the greatest mental improvement follows removal of diseased tubes and ovaries, and next to these the correction of displacements and lacerations of the cervix and perineum.

There seems to be no evidence that operations on insane women tend in the least to aggravate the mental state. These patients undergo operations equally as well as other classes. In those cases in which cures are anticipated as a direct result of operations a greater per cent. follows operations done early in the disease before the mental alienation has become fixed.

The strong opposition by many physicians in charge of insane asylums grows out of the fact that they fear surgical operations involving the removal of tubes and ovaries. They have not quite forgotten the epidemic of surgical hysteria of the early 80s, where removal of the tubes and ovaries was indicated in all cases where medicine failed. A removal of the ovaries and tubes when they are not diseased is of rarest necessity. An instance is that of a case where menstruation was attended by a mania lasting for ten or more days covering a period of several years. These are sometimes failures.

A condition which has recently been mentioned as a cause of insanity is old abscess of tubes involving the ovarian and adjacent structures in extensive adhesion. These cases are subject to severe and continuous pelvic pain which finally reaches its limit in faulty nutrition, general and cerebral anemia incident to insanity.

The surgical treatment of insane women is too early in its in-

fancy for the wisest to draw conclusions as to its exact value. There are some facts relating to it, however, which seem well established:

1st. That a large per cent. of insane women are the subjects of pelvic disease.

2nd. That these diseases in some instances affect the general health, endanger the life, and are causative and contributory to the mental condition.

3rd. That insane women bear surgical operations well without the mental disease being made worse.

4th. That in most institutions and in private practice surgical examination and treatment of these diseases are neglected.

To the general practitioner it is a matter of much practical importance, as everyone has to do with an occasional case of insanity.

Without rushing to conclusions, it seems safe to say again that a large per cent. of insane women have pelvic disease, and an early diagnosis of such lesions renders early surgical treatment possible; and these form a class in themselves in which the benign results of surgical interference are most apparent.

As is often the case the general doctor has the load to carry. The responsibility of early treatment and prompt diagnosis rests with him, and if the near future holds something better in the treatment of insane women, it will be the same story as in appendicitis, ectopic pregnancy, and allied conditions, where the general practitioner makes a diagnosis, and with it has the courage of his convictions.

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# Journal Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies.  
Published Monthly under the supervision of the Publishing Committee

ADDRESS ALL COMMUNICATIONS TO 534 NORTH VANDEVENTER AVENUE, ST. LOUIS.

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Volume III.

MAY, 1907.

Number 11

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E. J. GOODWIN, M. D., EDITOR.

PUBLICATION COMMITTEE:

C. M. NICHOLSON,

WALTER B. DORSETT.

B. M. HYPES.

W. G. MOORE.

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## EDITORIAL.

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### THE SEMI-CENTENNIAL MEETING.

The Fiftieth Annual Meeting promises to be the most enthusiastic and the most largely attended meeting in the history of the organization. The opening exercises will be held on the evening of the first day, Tuesday the 14th. At this meeting the President will deliver his address which will be followed by the orations in medicine and surgery.

The members of Cole County Medical Society have arranged a most interesting program to celebrate the semi-centennial meeting. These exercises will be held on the evening of the second day, Wednesday the 15th, at Frienel's Garden. Governor Folk will address the assembly and Dr. W. B. Outten will respond.

All living ex-presidents have been invited to be present and most of them have promised to attend. These men have seen the Association grow from a small handful of earnest workers into a united organized body, with members from every section of the state.

In 1850 about 150 physicians gathered together at Boonville and the Association was organized under the presidency of Dr. W. G. Thomas, of Boonville. About twenty counties were represented. Today our roster shows a membership of something over 2,400 members of the profession, and 103 counties out of a total of 115 are organized and affiliated with the state organization.

With all this we are only beginning to realize the full strength of our influence and power. At the last session of the Legislature more practical medical laws were passed than at any previous session. The profession in the state owes much to the medical members of the legislature for their intelligent and active co-operation in securing the passage of these laws. If a larger percentage of physicians could be elected to serve in the General Assembly it would strengthen our cause



when medical laws are introduced, and the citizens of the commonwealth would lose nothing of intelligence and wisdom in the consideration of other measures presented for passage.

This semi-centennial meeting should mark the beginning of a new era in the history of the State Medical Association. In the next five years more can be accomplished, through organized effort and with the earnest support of every member, than was done in the past fifty years in all that makes for the good of the profession, of the people and of the State.

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### MEETING PLACE.

The Association will meet in the Capitol Building, providing the special session of the Legislature adjourns before the 14th. Should the Legislature remain in session during the period of our meeting we will hold our sessions in the Court House and in the halls of the Y. M. C. A. building. The indications are that the Legislature will adjourn early in May and that the Capitol Building will be at our disposal.

The hotel accommodations in Jefferson City are ample for the meeting, even though the Legislature should remain in session. The Madison Hotel now has 100 rooms, 50 with bath, and long distance telephone in every room. A splendid new cafe has been installed and patrons may reserve rooms either on the European plan or the American plan. The Central Hotel has also built an addition containing sixty rooms, and the Monroe House has been remodeled. Members may feel confident of securing comfortable and pleasant quarters both in the hotels and in the many private homes that are thrown open for our entertainment by the hospitable citizens of Jefferson City.

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### HOW TO SECURE THE ONE AND ONE-THIRD RATE.

The railroads have granted a rate of one and one-third fare for the round trip to Jefferson City, on the certificate plan. Members must not fail to obtain a certificate from the ticket agent showing the sale of a ticket to Jefferson City. Those members who are compelled to change *en route* and continue the journey on a line foreign to the one from their home towns, must obtain two certificates, one from each agent from whom a ticket is purchased. The certificate is valueless unless it shows Jefferson City as the destination. Please don't forget this.

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### CREDENTIALS FOR DELEGATES.

Delegates should bring credentials from the societies which they represent. These credentials should be handed to the Secretary immediately upon arrival at the meeting. In this way every delegate

will be accredited with attendance at the meeting. Last year several delegates failed to receive proper recognition in the printed list of delegates present. We should not permit this to happen again. Alternates will be recognized in the absence of the regularly elected delegate if proper credentials are presented. Credentials must be signed by the secretary and the president of the affiliated county societies.

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Members who desire to exhibit specimens in the Pathological and Anatomical Exhibit, and who have not been able to send them to the committee, may bring them to the meeting place where they will be received by the committee and placed in the exhibit. Dr. Guthrie McConnell will be at the booth to receive these specimens from the members.

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The Governor has appointed Dr. S. L. Baysinger, of Rolla, a member of the board of trustees of the Missouri State University. This appointment gives the medical profession two members on this board, the other member being Dr. John C. Parish, of Vandalia.

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Buchanan County Medical Society has changed its name to the St. Joseph Buchanan County Medical Society. This society has grown steadily and now numbers eighty-five members. They will be entitled to two delegates at the Jefferson City meeting.

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Dr. John S. Daviess, of St. Louis, was convicted and sentenced to serve five years in the penitentiary for performing an operation on a young woman which resulted in her death in December last. The St. Louis Medical Society was instrumental in gathering much of the evidence which convicted him.

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The trial of "Dr. H. C. Carson," of Kansas City, charged with practicing medicine without a license, will begin in the Criminal Court under Judge Wallace, May 2d. The movement was instigated by Geo. Creel. A full account of the proceedings will be found in the *Independent*, of which Mr. Creel is publisher. The last two publications, giving the deposition of the "Doctor" and his assistant, Planck, are alone worth the price of the paper.—(From *Bulletin of the Jackson County Medical Society*.)

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#### PRESCRIPTIONS FOR LIQUOR MUST BE REPORTED MONTHLY.

An Act to repeal section 3048a of chapter 23 of the Revised Statutes of Missouri, 1899, in relation to druggists and their license.

Sec. 1. That section 3048a of the Revised Statutes of Missouri, 1899, be and the same is hereby repealed, and the following new section in lieu thereof, to be known as section 3048b.

Sec. 3048b. Every druggist, proprietor of a drug store or a phar-

macist shall, on some day of the first week of each and every month, file with the county clerk of the county in which he is doing business a list of all prescriptions compounded by him or those in his employ, prescribing liquors during the preceding month. And said list shall be accompanied by an affidavit of the druggist, proprietor of a drug store or pharmacist, stating that said list so filed is a true list of all prescriptions filed (filled) by him or those in his employ during the preceding month. And on failing, neglecting, or refusing so to do, shall be guilty of a misdemeanor, and on conviction, shall be punished by a fine not less than fifty nor more than \$200.

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### THE HODGEN MEMORIAL MEETING.

On the afternoon of April 28th the St. Louis Medical Society held a memorial meeting in commemoration of the twenty-fifth anniversary of the death of Dr. John T. Hodgen.

Dr. Hodgen was one of the best known surgeons of his day, not only in this state but throughout the entire country. He is remembered not alone as an eminent physician and surgeon but his memory is cherished also because of his sympathy with the suffering, his cheering words for the struggling young physician and for his unselfish devotion to his profession. He was successively president of the St. Louis Medical Society, the Missouri State Medical Association and of the American Medical Association.

Following is the program of the memorial exercises:

INVOCATION—REV. SAMUEL J. NICCOLLS, D. D.

ADDRESS—Dr. Hodgen as a National and International Figure in Medicine. JOSEPH M. MATHEWS, M. D., of Louisville, former President American Medical Association.

ADDRESS—His Educational Influence in the Mississippi Valley.

WARREN B. OUTTEN, M. D., Chief Surgeon Missouri Pacific Railroad.

ADDRESS—The Debt of Missouri to his Example and Memory.

CHARLES H. WALLACE, M. D., of St. Joseph, Mo., President Missouri State Medical Association.

ADDRESS—His Worth as a Citizen. CHARLES NAGEL, Esq., of the St. Louis Bar.

ADDRESS—His Power and Influence as a Teacher over his Classes.

HENRY C. FAIRBROTHER, M. D., of East St. Louis, Illinois.

ADDRESS—His Student and Social Life. LE GRAND ATWOOD, M. D., of Ferguson, Mo.



CAT.



W. G. THOMAS, M. D.  
President, 1850.

# PRESIDENTS OF THE MISSOURI STATE MEDICAL ASSOCIATION.

YEAR.	NAME.	ADDRESS.
1850	*W. G. Thomas, M. D.....	Boonville
1851	*W. H. McPheeters, M. D.....	St. Louis
1852	*J. B. Johnson, M. D.....	St. Louis
1853	*J. P. Vaughn, M. D.....	Glasgow
1854	*J. B. Alexander, M. D.....	Lexington
1855	*C. A. Pope, M. D.....	St. Louis
1856	No records.	
1857	No records.	
1858	No records.	

The gap between 1858 and 1867 occurred during the Civil War.

1867	*G. A. Williams, M. D.....	Boonville
1868	*W. B. Morris, M. D.....	Bridgeton
1869	*Charles F. Clayton, M. D.....	Ralls County
1870	*T. B. Lester, M. D.....	Kansas City
1871	J. E. Tefft, M. D.....	Springfield
1872	*E. Montgomery, M. D.....	St. Louis
1873	*S. S. Todd, M. D.....	Kansas City
1874	*W. O. Torrey, M. D.....	Hannibal
1875	*John T. Hodgen, M. D.....	St. Louis
1876	J. W. Trader, M. D.....	Sedalia
1877	*F. M. Johnson, M. D.....	Platte City
1878	E. W. Schaufler, M. D.....	Kansas City
1879	*G. M. B. Maughs, M. D.....	St. Louis
1880	J. M. Allen, M. D.....	Liberty
1881	J. M. Allen, M. D.....	Liberty
1882	Willis P. King, M. D.....	Sedalia
1883	*A. E. Gore, M. D.....	Paris
1884	*E. H. Gregory, M. D.....	St. Louis
1885	*H. H. Middlekamp, M. D.....	Warrenton
1886	*G. C. Catlett, M. D.....	St. Joseph
1887	*J. W. Jackson, M. D.....	Kansas City
1888	Frank J. Lutz, M. D.....	St. Louis
1889	A. W. McAlester, M. D.....	Columbia
1890	L. I. Mathews, M. D.....	Carthage
1891	*A. B. Sloan, M. D.....	Kansas City
1892	*T. F. Prewitt, M. D.....	St. Louis
1893.	A. B. Miller, M. D.....	Macon City
1894	W. H. Evans, M. D.....	Sedalia
1895	*J. M. Richmond, M. D.....	St. Joseph
1896	C. Lester Hall, M. D.....	Kansas City
1897	J. H. Duncan, M. D.....	St. Louis
1898	Jacob Geiger, M. D.....	St. Joseph
1899	George R. Highsmith, M. D.....	Carrollton
1900	Walter B. Dorsett, M. D.....	St. Louis
1901	U. S. Wright, M. D.....	Fayette
1902	J. D. Griffith, M. D.....	Kansas City
1903	Woodson Moss, M. D.....	Columbia
1904	W. G. Moore, M. D.....	St. Louis
1905	Jabez N. Jackson, M. D.....	Kansas City
1906	D. C. Gore, M. D.....	Marshall
1907	C. H. Wallace, M. D.....	St. Joseph

\*Deceased.

## Semi-Centennial Meeting.

### MISSOURI STATE MEDICAL ASSOCIATION.

Jefferson City, May 14, 15, 16, 1907.

OFFICERS 1906-7.

#### PRESIDENT.

C. H. WALLACE, M. D.....St. Joseph, Mo.

#### VICE PRESIDENTS.

F. W. ALLEN, M. D.....Callao  
W. G. COWAN, M. D.....Sedalia  
C. J. ORR, M. D.....St. Louis  
E. H. THRAILKILL, M. D.....Kansas City  
H. L. RIED, M. D.....Charleston

#### SECRETARY.

C. M. NICHOLSON, M. D.....St. Louis

#### ASSISTANT SECRETARIES.

GAIL ALLEE, M. D.....Lamar  
H. A. McDONALD, M. D.....Pisgah

#### TREASURER.

J. FRANKLIN WELCH, M. D.....Salisbury

#### MEDICAL SECTION.

Chairman, J. H. P. BAKER, M. D. ....Salisbury  
Secretary, GAIL ALLEE, M. D.....Lamar

#### SURGICAL SECTION.

Chairman, WARREN B. OUTTEN, M. D.....St. Louis  
Secretary, H. A. McDONALD, M. D.....Pisgah

#### ORATORS.

Oration in Medicine, WM. F. KUHN, M. D.....Farmington  
Oration in Surgery, PAUL Y. TUPPER, M. D.....St. Louis

#### COMMITTEES.

##### ARRANGEMENT COMMITTEE.

MEMBERS OF COLE COUNTY MEDICAL SOCIETY.

##### COMMITTEE ON SCIENTIFIC WORK.

C. M. Nicholson, M. D., Chairman; J. C. Morfit, M. D.,  
F. E. Murphy, M. D.

##### PUBLICATION COMMITTEE.

C. M. Nicholson, M. D., Chairman; W. B. Dorsett, M. D., B. M. Hypes,  
M. D., W. G. Moore, M. D.

##### COMMITTEE ON PUBLIC POLICY AND LEGISLATION.

F. J. Lutz, M. D., Chairman; Geo. Homan, M. D., H. E. Pearse, M. D.

##### COMMITTEE ON MEDICAL EDUCATION.

Woodson Moss, M. D., Chairman; W. B. Dorsett, M. D.,  
Robt. T. Sloan, M. D.

##### COMMITTEE ON TUBERCULOSIS.

Wm. Porter, M. D., Chairman; J. M. Allen, M. D., W. S. Allee, M. D.,  
B. H. Zwart, M. D.



## DELEGATES.

COUNTY.	DELEGATE.	COUNTY.	DELEGATE.
Adair .....	James Hanks	Jasper.....	R. L. Neff
Andrew.....	E. C. Bennett	Johnson.....	L. F. Murray
Barton.....	T. H. Duckett	Knox.....	R. A. Wilsey
Bates.....	T. C. Boulware	Lafayette.....	W. A. Braecklein
Benton.....	M. Dillon	Lawrence-Stone.....	C. A. Moore
Boone.....	Woodson Moss	Lewis.....	H. E. Dunlap
Buchanan.....	{ ..T. H. Doyle	Linn.....	J. P. Oven
	P. I. Leonard	Marion.....	Thos. Chowning
Caldwell.....	W. T. Lindley	Mississippi.....	A. W. Chapman
Callaway.....	J. F. Harrison	Moniteau.....	W. R. Patterson
Cape Girardeau.....	G. W. Vineyard	Monroe.....	C. H. Dixon
Carroll.....	Geo. R. Highsmith	Newton.....	R. C. Lamson
Cass.....	J. S. Triplett	Nodaway.....	F. R. Anthony
Cedar.....	R. O. Crawford	Phelps.....	F. L. Baysinger
Chariton.....	Oliver McEwen	Pike.....	D. M. Pearson
Clay.....	H. Rowell	Platte.....	S. Redman
Clinton.....	J. A. Franklin	Putnam.....	J. A. Townsend
Cole.....	J. L. Thorpe	Ralls.....	W. T. Waters
Cooper.....	R. L. Evans	Ray.....	R. L. Hamilton
Daviess.....	H. E. Songer	Saline.....	D. F. Manning
Gasconade-Maries-Osage	J. J. Ferrell	Schuyler.....	J. D. Bridges
Grundy.....	J. A. Asher	Scotland.....	A. E. Platter
Greene.....	C. E. Fulton	Shannon.....	P. D. Gum
Harrison.....	F. H. Broyles	Shelby.....	Chas. Chapman
Henry.....	J. R. Hampton	St. Clair.....	John Seevers
Holt.....	C. L. Evans	St. Francois.....	F. L. Keith
Howard.....	C. O. Lewis	St. Louis.....	W. H. Townsend
Howell.....	J. W. Gingham		{ ..Paul Y. Tupper
	.....F. E. Murphy		.....J. C. Morfit
	J. M. Frankenburger		.....Jesse S. Myer
	.....R. T. Sloan		..Wm. W. Graves
Jackson.....	{ ..Eugene Carbaugh	St. Louis City	{ ..John Green, Jr
	.....J. P. Kanoky		..W. H. Stauffer
	.....A. H. Cordier		..M. B. Clopton
	.....N. P. Wood		..F. L. Henderson
			..E. M. Porterfield
		Worth.....	W. E. McKinley

## COUNCILLOR DISTRICTS AND COUNTIES IN EACH DISTRICT.\*

First District.—Councillor, E. E. Parrish, Memphis. Counties: Clark, Scotland, Schuyler.

Second District.—Councillor, H. Jurgens, Edina. Counties: Adair, Knox, Lewis.

Third District.—Councillor, J. D. Brummall, Salisbury. Counties: Chariton, Carroll, Livingston, Linn.

Fourth District.—Councillor, C. R. Buren, Princeton. Counties: Grundy, Sullivan, Mercer, Putnam.

Fifth District.—Councillor, E. H. Miller, Liberty. Counties: Platte, Clay, Ray, Clinton, Caldwell, Daviess.

Sixth District.—Councillor, W. E. McKinley, Denver. Counties: Harrison, Worth, Gentry, DeKalb.

Seventh District.—Councillor, W. T. Elam, St. Joseph. Counties: Buchanan, Holt, Atchison, Nodaway, Andrew.

Eighth District.—Councillor, L. W. Dallas, Hunnewell. Counties: Shelby, Marion, Ralls.

Ninth District.—Councillor, C. W. Reagan, Macon. Counties: Macon, Randolph, Monroe.

Tenth District.—Councillor, Woodson Moss, Columbia. Counties: Audrain, Boone, Howard, Callaway, Warren, *Montgomery*.

Eleventh District.—Councillor, W. B. Dorsett, St. Louis. Counties: Lincoln, St. Charles, St. Louis, Pike.

Twelfth District.—Councillor F. J. Lutz, St. Louis. Counties: Franklin.

Thirteenth District.—Councillor, B. M. Hypes, St. Louis. Counties: Jefferson, St. Genevieve, Perry.

Fourteenth District.—Councillor, Wm. F. Kuhn, Farmington. Counties: Washington, Reynolds, Iron, St. Francois.

Fifteenth District.—Councillor, J. J. Norwine, Poplar Bluff. Counties: Mississippi, New Madrid, Wayne, Stoddard, Dunklin, Butler, Ripley, Carter, Pemisicot.

Sixteenth District.—Councillor, J. D. Porterfield, Jr., Cape Girardeau. Counties: Scott, Madison, Cape Girardeau, *Bollinger*.

Seventeenth District.—Councillor, Frank De Vilbiss, Eugene. Counties: Miller, Moniteau, Morgan, Camden.

Eighteenth District.—Councillor, G. Ettnmueller, Jefferson City. Counties: Cole, Osage, Maries, Gasconade.

Nineteenth District.—Councillor, R. D. Haire, Clinton. Counties: Pettis, Henry, Benton, St. Clair, *Hickory*.

Twentieth District.—Councillor, C. T. Ryland, Lexington. Counties: Lafayette, Saline, Cooper.

Twenty-first District.—Councillor, M. P. Overholser, Harrisonville. Counties: Jackson, Cass, Johnson.

Twenty-second District.—Councillor, J. R. Buchanan, Nevada. Counties: Bates, Vernon, Barton.

Twenty-third District.—Councillor, A. R. Snyder, Joplin. Counties: McDonald, Newton, Jasper, Cedar, *Dade*.

Twenty-fourth District.—Councillor, R. L. Johnson, Rolla. Counties: Crawford, Phelps, Pulaski, Laclede, Dent, *Dallas*.

Twenty-fifth District.—Councillor, T. A. Coffelt, Springfield. Counties: Greene, Lawrence, Barry, Stone, Christian, Webster, *Polk, Taney*.

Twenty-sixth District.—Councillor, H. C. Shuttee, West Plains. Counties: Howell, Shannon, *Ozark, Oregon, Texas, Wright, Douglas*.

\*Counties in *italic* are unorganized.

## NOTICE.

Medical and Surgical Sections will be held at the Capitol Building.

All members will please register with the Registration Committee immediately upon their arrival.

The railroads have granted a rate of one and one-third fare for the round trip. Ask the ticket agent for a certificate at time of purchase of ticket. If necessary to purchase more than one ticket, secure a certificate from each agent for the certificate must show Jefferson City as destination. Deposit your certificate with the Registrar at the time you register.

It is necessary for the certificate to bear the signature of the Secretary and the Joint Agent before it will be honored by the ticket agent for reduced return fare.

Sessions will be called to order at the hour fixed on the Program. It is especially desired that the members be prompt in their attendance.

All papers must be typewritten and should be handed to the Secretary of the Section as soon as read.

No paper will be allowed to occupy more than twenty minutes in its reading. Speakers designated to open the discussion may speak seven minutes, general discussion five minutes, and ten minutes for closing the discussion by the essayist. No one may speak the second time on one subject without the unanimous consent of the members present.

## MEETING PLACES.

Surgical Section meets in Senate Chamber.

Medical Section meets in House of Representatives.

## ENTERTAINMENTS.

Exercises in commemoration of the Fiftieth Anniversary will be held at Frienel's Garden on Wednesday evening, May 15, at 8 o'clock. Governor Folk will address the members and Dr. W. B. Outten will respond. The Committee of Arrangements have spared no effort to make this an evening of special enjoyment to every member. A number of social features will add to the pleasure of the occasion. All living ex-presidents of the Association have been invited to be present and will be seated on the platform with the speakers.

## HOTEL RATES.

The hotel accommodations have been materially increased since our last meeting. Sixty rooms have been added to the Madison and Central Hotel has also increased its accommodations by sixty rooms. The Monroe House has been remodeled.

Madison Hotel—Headquarters—American plan, \$2.50 to \$4.00; European plan, \$1.00 to \$3.00.

Monroe Hotel—\$2.00 to \$2.50. American plan.

Central Hotel—\$2.00 to \$2.50. American plan.

Elston House—\$1.50 per day. American plan.

City Hotel—\$1.00 per day. European plan.

Missouri members of Rush Medical College alumni will meet at a banquet at Jefferson City on Wednesday night, May 15th.

All Rush graduates in Missouri are requested to attend.

A meeting of the Alumni of the Beaumont Hospital Medical College will be held in the parlors of the Madison, Wednesday evening, May 15th, at 8 o'clock. All graduates of Beaumont are earnestly requested to attend.



PROGRAM.

THE PATHOLOGICAL AND ANATOMICAL EXHIBIT.

THE PATHOLOGICAL AND ANATOMICAL EXHIBIT.

1. Exhibit from the Anatomical Department of St. Louis University.
2. An Exhibition of Specimens of Tuberculosis in Various Organs. From Washington University Medical Department.
3. Exhibit of Early Human Embryos, specimens and Models. By C. M. Jackson, M. D., University of Missouri.
4. Exhibit of Pathological Ophthalmological Specimens. From St. Louis College of Physicians and Surgeons.
5. Exhibit of Specimens of Hypernephroma. From Jackson County Medical Society.
6. Exhibit of Plant Pathology. By Dr. Herman von Schrenck.
7. Exhibit of Selected Specimens. From Barnes Medical College.
8. Comprehensive Collection of Carcinoma Specimens. From St. Louis Medical Society.

In addition to the above there will be microscopic demonstrations, lantern slide talks, and a large collection of single specimens of unusual interest.

The address by Dr. Von Schrenck, Consulting Pathologist of the U. S. Department of Agriculture, will be one of rare attractiveness.

## SEMI-CENTENNIAL MEETING.

Jefferson City, May 14, 15, 16, 1907.

### PROGRAM.

TUESDAY, MAY FOURTEENTH.

- Judicial Council called to order at 9:30 a. m.
- House of Delegates called to order at 9:30 a. m.
- Roll call and announcement of result.
- Reading of minutes of previous meeting.
- Reading of President's message and recommendations.
- Report of Committee on Arrangements.
- Report of Committee on Medical Education.
- Report of Committee on Scientific Work.
- Report of Committee on Public Policy and Legislation.
- Report of Publication Committee.
- Report of Treasurer.
- Report of Secretary.
- Election of Committee on Nominations. (For the nomination of five Vice Presidents, five Councillors and members of the committees on Scientific Work and Public Policy and Legislation).
- Election of Delegates to American Medical Association. (Four to elect; two for one year, two for two years).
- Introduction of amendments to the Constitution and By-Laws.

### REPORT OF COUNCILLORS.

- 1st District.....E. E. Parrish, Memphis
- 2nd District.....H. Jurgens, Edina
- 3rd District.....J. D. Brummall, Salisbury
- 4th District.....C. R. Buren, Princeton
- 5th District.....E. H. Miller, Liberty
- 6th District.....W. E. McKinley, Denver
- 7th District.....W. T. Elam, St. Joseph
- 8th District.....L. W. Dallas, Hunnewell
- 9th District.....C. W. Reagan, Macon
- 10th District.....Woodson Moss, Columbia
- 11th District.....W. B. Dorsett, St. Louis
- 12th District.....F. J. Lutz, St. Louis
- 13th District.....B. M. Hypes, St. Louis
- 14th District.....Wm. F. Kuhn, Farmington
- 15th District.....J. J. Norwine, Poplar Bluff
- 16th District.....J. D. Porterfield, Jr., Cape Girardeau
- 17th District.....Frank De Vilbiss, Eugene
- 18th District.....G. Ettmueller, Jefferson City
- 19th District.....R. D. Haire, Clinton
- 20th District.....C. T. Ryland, Lexington
- 21st District.....M. P. Overholser, Harrisonville
- 22nd District.....J. R. Buchanan, Nevada
- 23rd District.....A. R. Snyder, Joplin
- 24th District.....R. L. Johnson, Rolla
- 25th District.....T. A. Coffelt, Springfield
- 26th District.....H. C. Shuttee, West Plains

### GENERAL SESSIONS, 7:30 P. M.

- ADDRESS OF THE PRESIDENT.....C. H. Wallace, M. D., St. Joseph
- ORATION IN MEDICINE.....Wm. F. Kuhn, M. D., Farmington
- ORATION IN SURGERY.....Paul Y. Tupper, M. D., St. Louis





## Medical Section.

THIRD DAY—THURSDAY, MAY 16TH, 1907.

MORNING SESSION—9 O'CLOCK.

- The Eye and the Nervous System.....H. E. Derwent, M. D., Clinton  
 A Plea for the Cross-Eyed Child.....John Green, Jr., M. D., St. Louis  
 A Plea for the State Care of Nervous Individuals.  
 John Puntun, M. D., Kansas City  
 Medical Education: Preliminary and Professional.  
 H. E. Dunlop, M. D., Canton  
 What We Have and What We Should Have of Medical Law Governing  
 the Practice of Medicine.....C. B. Hardin, M. D., Kansas City.  
 Attitude of the Public Toward the Doctor.  
 H. S. Crawford, M. D., Harrisonville  
 Medical Scraps.....T. F. Lockwood, M. D., Butler  
 The Neglected Side of the Profession. O. G. Gleaves, M. D., St. Joseph  
 The Art of Prescribing.....J. C. Matthews, M. D., Springfield  
 Some Reflections Concerning the General Practitioner.  
 J. Robert Buchanan, M. D., Nevada.

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## Medical Section.

THIRD DAY—THURSDAY, MAY 16TH, 1907.

AFTERNOON SESSION—1:30 O'CLOCK.

- Some Reflections Concerning the Status of the Medical Profession  
 Robt. H. Goodier, M. D., Hannibal  
 Infantile Intussusception.....J. D. Brummall, M. D., Salisbury  
 Let Us Get Closer to the People...T. L. Bradley, M. D., Warrensburg  
 Appendicitis from the Standpoint of the General Practitioner.  
 R. M. Winn, M. D., Ilasco  
 The Duty of the Examining Surgeon for Life Insurance Companies  
 A. B. Burgwin, M. D., Fayette  
 Efficient Protection Against Suits for Alleged Malpractice.  
 C. F. Briegleb, M. D., St. Clair  
 The Borderland of Gynecology and Neurology.  
 Frank Hinchey, M. D., St. Louis  
 Diabetes Mellitus.....C. C. Leeper, M. D., Braymer  
 Gonorrheal Arthritis with Report of Cases.  
 W. E. H. Bondurant, M. D., Memphis  
 Early Diagnosis of Carcinoma of the Stomach.  
 Wm. Engelbach, M. D., St. Louis

## Surgical Section.

SECOND DAY—WEDNESDAY, MAY 15TH, 1907

MORNING SESSION—9 O'CLOCK.

The Surgical Treatment of Enlarged Prostate.

C. E. Fulton, M. D., Springfield

A Few Points Relative to Prostatectomy.

C. F. Roberts, M. D., Kansas City

Local Anesthesia.....R. D. Haire, M. D. Clinton

Carcinoma of the Breast.....G. A. Beedle, M. D., Kansas City

Present Status of X-Ray Treatment of Malignant Growths.

J. N. Scott, M. D., Kansas City

Cystic Degeneration of the Ovary as a Cause of Dysmenorrhea

W. B. Dorsett, M. D., St. Louis

The Surgical Treatment of Glaucoma.

James Moores Ball, M. D., St. Louis

## Surgical Section.

SECOND DAY—WEDNESDAY, MAY 15TH, 1907.

AFTERNOON SESSION—1:30 O'CLOCK.

Large Aneurysm in Scarpa's Triangle; Condition of Patient Eighteen Months After Ligature of Femoral Artery.

L. J. Dandurant, M. D., St. Joseph

Report of a Case of Aneurysm of the Subclavian; Ligature in the First Portion; Recovery.....Herman E. Pearse, M. D., Kansas City

The Treatment of Tubercular Peritonitis with Report of a Case.

H. C. Dalton, M. D., St. Louis.

Congenital Malformation of the Rectum; Report of Cases.

W. H. Coffey, M. D., Kansas City

Stricture of the Rectum.....W. J. McGill, M. D., St. Joseph

Malignant Disease of the Rectum.....Francis Reder, M. D., St. Louis

SECOND DAY.—WEDNESDAY, MAY 15TH.

GENERAL SESSION, 8 P. M.

Exercises in commemoration of the Fiftieth Anniversary, at Friel's Garden.

## Surgical Section.

THIRD DAY—THURSDAY, MAY 16TH, 1907.

MORNING SESSION—9 O'CLOCK.

- Peritoneal Tuberculosis.....J. D. Seba, M. D., Bland  
 Cholecystectomy vs. Cholecystotomy..W. U. Kennedy, M. D., St. Louis  
 The Omentum as a Surgical Factor....T. E. Potter, M. D., St. Joseph  
 Inguinal Hernia.....C. G. Geiger, M. D., St. Joseph  
 A Protest Against the Use of Taxis in Strangulated Hernia.  
     A. H. Meisenbach, M. D., St. Louis  
 Post-Operative Accidents and Sequelæ....L. A. Todd, M. D., St. Joseph  
 Personal Experiences in the Removal of Ureteral Calculi.  
     Willard Bartlett, M. D., St. Louis
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## Surgical Section.

THIRD DAY—THURSDAY, MAY 16TH, 1907.

AFTERNOON SESSION—1:30 O'CLOCK.

- The Value of the Roentgen Rays in the Diagnosis of Renal and  
 Ureteral Calculi.....R. D. Carman, M. D., St. Louis  
 The Effect of Surgical Operation on Diabetic Patients.  
     Louis T. Riesmeyer, M. D., St. Louis  
 Relief of Obstinate Deafness of Chronic Middle Ear Disease.  
     Robert Barclay, M. D., St. Louis  
 The Tonsillar Ring as an Etiological Factor in Diseases of the Ear, Nose  
 and Throat.....P. I. Leonard, M. D., St. Joseph  
 Intestinal Obstruction.....Carroll Smith, M. D., St. Louis  
 Surgical Treatment of Diffuse General Peritonitis; Report of 17 Cases;  
 Recovery of 15 Cases.....John Young Brown, M. D., St. Louis



## COUNTY SOCIETY NOTES

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### CALDWELL COUNTY MEDICAL SOCIETY.

The Caldwell County Medical Society met in Braymer, Thursday, April 4th, in regular session. The attendance was good.

Dr. C. C. Leeper read a paper on pneumonia and Dr. Tinsley Brown presented a paper on pemphigus.

The appointment of Dr. C. C. Leeper as essayist for Missouri Medical Association at a called meeting when but four members were present, and of Dr. W. T. Lindley as Delegate, was approved.

There were six applications for membership. Five were elected and one rejected.

The Society approved of the plan of requiring a minimum of \$5.00 for all old line medical examinations where an urinary analysis is required.

The next regular meeting will be held at Kingston in July.—  
TINSLEY BROWN, M. D., Reporter.

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### CASS COUNTY MEDICAL SOCIETY.

The following resolution was passed by unanimous vote and the secretary instructed to forward same to the editor of the State Journal for publication:

Resolved: That the Cass County Medical Society request the Committee on Publication to admit the advertisement of no proprietaries to the pages of the Journal of the Missouri State Medical Association unless such proprietaries have been endorsed by the Council on Pharmacy and Chemistry of the A. M. A.

The Society voted to hold its next meeting in Pleasant Hill, May 2, 1907.

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### COLE COUNTY MEDICAL SOCIETY.

At the last regular meeting of the Cole County Medical Society the following officers were elected for the ensuing year: C. P. Hough, president; N. T. Leach, vice president; S. V. Bedford, secretary; J. P. Porth, treasurer; J. L. Thorpe, state delegate. The following committees were appointed by the president to arrange for the entertainment of the State Medical Association meeting to be held here May 14th, 15th and 16th:

Arrangements: Doctors Ettmueller and Thorpe.

Exhibitions: Doctors Chastain and Bedford.

Reception: Doctors Clark, Lopp and Hill.

S. V. BEDFORD, M. D., Secretary.

## COOPER COUNTY MEDICAL SOCIETY.

The Cooper County Medical Society met in Boonville on April 2nd, 1907. Members present: Drs. F. R. Smiley, R. L. Evans, P. L. Hurt, A. E. Monroe, Jno. R. Lionberger.

As this meeting was the first one since the January meeting a regular program had not been prepared and the Society occupied its time in the discussion of clinical cases.

Cases were presented by Drs. Hurt, Monroe, Evans and Smiley and discussions of the cases presented followed. Following the presentation and discussion of clinical cases the following resolution was read:

Whereas, it having come to our knowledge that it has become a custom among many of the fraternal organizations and societies to contract with a physician or physicians, usually members of their orders or societies, to obligate themselves as physicians to attend the sick members thereof, under contract, at a price regulated and determined by the society or order, such price or remuneration being much less than that charged for similar services in the same community, thereby debasing and degrading our noble profession, therefore, be it

Resolved: That the Cooper County Medical Society condemn such contract practice and that its members agree and declare that they will not enter into such a contract with any lodge, society or association whatever, except to act as examiner for candidates for membership thereof.

This resolution was discussed by the society and upon motion it was ordered carried over to the next meeting to await the final action of the society.

There being no further business the society adjourned to meet May 7th, 1907.—JNO. R. LIONBERGER, Secretary.

## GREENE COUNTY MEDICAL SOCIETY.

## MEETING OF MARCH 22ND.

We have received letters from the State Board of Health promising their assistance in enforcing the medical practice laws here, citing cases and saying that Osteopaths can not legally practice obstetrics. The committee on open session reported that Professor Carrington would read a paper and appointed the following members to discuss it: Doctors Nixon, Bartlett, Ralston and Prof. E. E. Dodd. Also a paper by Dr. Smith which will be discussed by Doctors Terry, Fortner, Rienhoff and Father Lilly. The meeting is to be held in the Carnegie Public Library Building, April 26th.

The president set aside our meeting of May 10th for the business meeting and appointed Doctors Farnsworth, Rienhoff, Cox, Matthews and Smith as a committee to revise our Fee Bill and furnish a program for that meeting.

## MEETING OF APRIL 12TH.

Over thirty were present. The Committee on Public Health and Legislation reported that they had presented our cases to the Prosecuting Attorney and he had promised to look after the illegal practitioners and enforce the law.

Dr. O. N. Carter, of Brookline, and Dr. H. Janss were elected to membership in the society and two new applications were received.

Dr. C. E. Fulton was elected delegate to represent Greene county at the annual meeting to be held at Jefferson City.

Dr. Wm. Rienhoff read an interesting and scientific paper entitled "Some Remarks on the Treatment of Pneumonia." It was a long paper and he entered deeply into the subject. He said in part:

"Time experiments or discovery has made no improvement in the mortality of pneumonia so it still remains at 20 per cent. as an average.

"The discovery of the *diplococcus lanceolatus* as the cause of pneumonia has added nothing to the treatment, except a lot of specific remedies which have not proven to be reliable.

"The pneumococcus has been so much in evidence that the pathology of the living cells of the patient has almost been lost sight of.

Of the specific remedies it is doubtful whether they reach the cocci in the proper strength to do any good, or have the same effect that they do in the test tubes.

The alkaline treatment based on the principle of restoring the alkalinity of the blood, impaired by the pneumonic process, is wrong in light of recent investigation into the physico-chemical condition of the blood and electro-ozonization is rather a curiosity.

"The salicylic preparations alone of the drugs in question seem to have a beneficial effect, but continued trials will have to be made before their value can be proven.

"The treatment must be symptomatic, based on physiologic and pathologic facts and observations. If the toxic effects of the pneumococci are greater than the body can combat the patient will die.

"Over half of the patients need no help; one-third of the balance, owing to the toxic effects, are beyond help; it is for the remainder that medical aid is necessary."—J. L. ORMSBEE, Secretary.

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HARRISON COUNTY MEDICAL SOCIETY.

The regular quarterly meeting of the Harrison County Medical Society was held at Bethany on July 17, 1906.

Splendid papers were read by Dr. C. A. Mitchell of Blythdale, Dr. Jacob Geiger of St. Joseph, and Dr. W. E. McKinley of Denver, Mo.

The election of officers for 1907 resulted as follows: President, Dr. C. A. Mitchell, Blythdale; vice-president, W. H. Wiley, Ridge-



way; secretary and treasurer, Dr. F. H. Broyles, Bethany.

Our next meeting was held at Bethany on October 16, 1906, when Dr. A. H. Vandivert read an excellent paper on "Prevention of Tuberculosis," and Dr. W. E. McKinley of Denver, Mo., read a paper on "Chronic Rhinitis." Dr. G. W. Sellar of Mt. Moriah, and Dr. G. E. Gwinn presented interesting clinics.

Our last meeting was held at Bethany on April 16th, inst. This was a good meeting, although not largely attended.

Dr. J. K. Chipp of New Hampton, Dr. Wm. Swint, Dr. John Shibley and Dr. R. E. Ferguson of Gilman City, on application were elected to membership.

Dr. F. H. Broyles was elected a delegate to State Medical Society, with Dr. Geo. E. Gwinn as alternate.—F. H. BROYLES, M. D., Secretary.

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### HOLT COUNTY MEDICAL SOCIETY.

The second quarterly meeting of the Holt County Medical Society was held at Oregon, April 4th. The applications of several physicians were taken up, and upon favorable action they were elected to membership.

Among the communications was one from a Society in an adjoining County, asking the co-operation of this society in forming a new Councillor District to be composed of Andrew, Atchison, Nodaway and Holt Counties. After due consideration by this society our delegate was instructed to assist in bringing about the change to form a new District out of the counties named.

The afternoon was given over to the discussion of Meningitis and Puerperal Fever.

The next meeting will be held at Big Lake, July 18.—Jno F. CHANDLER, M. D., Secretary.

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### JASPER COUNTY MEDICAL SOCIETY.

The Jasper County Medical Society met in regular session on April 15th. There were fourteen members present.

Dr. A. B. Clark reported a case of a child of ten years who had swallowed an open safety pin on Thursday of last week. He saw the child immediately after the accident and took her to an x-ray but could not locate the pin. He gave her large doses of castor oil; got copious action of the bowels but no pin. Put the patient on solid food Saturday and on Sunday at 2 p. m. the pin was passed. A small amount of blood was passed with the feces.

Dr. Matthews was not in favor of giving purgatives in such cases. He thought potatoes was the treatment. Dr. Donohue stated that he preferred oat meal in large quantities.

Dr. Barnett read a paper on anemia. It was freely discussed.

Dr. R. L. Neff reported a very interesting case of periodic tachycardia in a woman, 35 years old; the patient had been having the peculiar heart attacks since 16 years of age. She would have an attack every two weeks to four months, coming on suddenly and stop suddenly: would last from 15 to 45 minutes; patient was very weak during the attacks and sometimes for two or three days thereafter. The heart sounds were normal but pulse so rapid it was impossible to count it. Respiration normal and patient warm. Three weeks ago was the worst attack she had ever had; lasted for two hours and the patient was very weak.

The following applications for membership were read and referred to Board of Censors for investigation: Doctors Julian Berry, Webb City; Herbert C. Powers, Chas. A. Talbott, Chitwood; H. L. Isherwood, Carl Junction; Geo. Sanz, Webb City, and Joel E. Johnson, Joplin.

It was moved and carried that the secretary be instructed to write a letter offering our thanks for the courteous treatment extended to us during the recent meeting held in Galena.

Dr. Matthews read an invitation to the society from the doctors of Carthage to attend the opening of the Carthage Hospital, Thursday, April 18th, 1907.

Moved and carried that Committee on Program hold a meeting and formulate a program for six months and report.

Moved and carried that the society shall meet every Tuesday night in each week instead of first and third Mondays of each month.

Moved, seconded and carried that the secretary be instructed to invite the Cherokee County Society, of Kansas, to attend our meeting to be held the fourth Tuesday of May, 1907. A committee of three was appointed to arrange to entertain them. The president appointed Doctors Watkins, Donohue and Barnett.

Dr. H. R. Haas was appointed as essayist for next regular meeting.—R. M. JAMES, Secretary.

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## JACKSON COUNTY MEDICAL SOCIETY

MEETING OF MARCH 5TH.

The regular weekly meeting of the Jackson County Medical Society was held in Atheneum Club rooms Tuesday evening, March 5th. The Chair read an amendment to our by-laws which in substance requires the secretary to send written notices of applicants for membership to each member of the society during the time between which such applications have been read in regular session and the time for voting on same by the Society; and, further, that applications for membership shall be voted upon at the first regular meeting of each month only, instead of at every meeting, as heretofore.

Doctors F. W. Froehling and Walter J. Lowrey having been re-

ported favorably by the committee, were by ballot unanimously, voted members of the society.

Dr. Wm. Frick read a paper entitled "Pathology and Treatment of Epithelioma," giving the following classification:—1. Superficial; 2. Deep or infiltrating. 3. Papillary or fungating. His treatment consisted in the superficial type of pastes, caustics, plastics, etc. He advocated the use of the x-ray under most modern methods of application. For the deep and papillary types surgery was to be considered the only hope and then only when taken before metastasis had begun. Those taking part in the discussion were Doctors Howard Hill, F. J. Hall, O. H. McCandless, J. F. Binnie, B. E. Fryer, E. H. Skinner, A. E. Hertzler, F. H. Brunig. Dr. Frick then closed the discussion.

Dr. E. H. Skinner next presented a paper entitled "Care of the Patient in Transit." This paper was full of practical points calling to the attention of the physician the many different necessities with which he is confronted in preparing his patient for a journey; also speaking of the failure on the part of the railroads to provide conveniences for the sick as well as their neglect to protect the public against contagion, which under such conditions must necessarily often occur. Those taking part in the discussion were Doctors Chester Hall, B. C. Hyde and R. E. Castelow.

#### MEETING OF MARCH 12TH.

Under Miscellaneous business Dr. G. Wilse Robinson read a resolution endorsing the movement on the part of the Missouri University in attempting to establish a medical department in Kansas City. A motion was made that said resolution be adopted and that copies of same be sent, one to the Curators of University, one to the Mayor of the City and one to the Upper and Lower House; motion carried unanimously. A motion was then made and carried that a committee of three be appointed to deliver said resolutions whereupon the Chair appointed Doctors G. Wilse Robinson, A. E. Hertzler, and C. C. Connover.

Dr. Franklin E. Murphy, having been requested by the society some weeks previous to prepare a paper on "Immunity" read a paper which was most complete, giving a resume of all theories expressed up to the present time, but brought special emphasis to bear upon Ehrlich's side chain theory.

His paper was accompanied by colored charts which served to make the theory more easily understood; he spoke of protective inoculation and the relative value of the different serums, of immunity established by attenuated cultures and by gradual increase in dosage of toxines. He also mentioned the methods used in the Pasteur Institute of inoculating against rabies by the gradual ascending scale of virulent cord emulsion.

Those taking part in the discussion were Doctors J. Z. Chambers,



Scott P. Child, B. E. Fryer, Wm. Frick and Hal Foster. Dr. Murphy then closed the discussion.

By motion Dr. H. C. Anderson's paper on "Anesthetics" was postponed to a future meeting and the society then passed into executive session for transaction of such business as might come before it.

#### MEETING OF MARCH 18TH.

A special meeting was held at office of Secretary at which time resolution of condolence were adopted in consideration of the death of Mrs. Dove, wife of our highly esteemed president. Never has a death outside a member of the society been more keenly felt than this one, and the noble, honorable life of Dr. Dove and the high esteem in which he is held by both the physicians of our city and his many friends outside the profession who know him, made his sorrow our own. Flowers were also sent.

#### MEETING OF MARCH 19TH.

Dr. Max Goldman presented a paper entitled "Chorea Minor: A Consideration of its Pathogenesis." The essayist spoke of the strong susceptibility to the disease in children of a nervous temperament and gave as exciting causes, injuries, intestinal derangement and faulty metabolism. In conclusion he reported a case that occurred in his private practice, the exciting cause of which was a kick on the head by a playmate.

Dr. Scott P. Child opened the discussion. Doctors B. E. Fryer, F. E. Murphy, J. Z. Chambers and H. O. Leonard also spoke. Dr Goldman closed discussion.

Dr. I. J. Wolf then presented a paper on Glenard's disease, a downward displacement of one or all the abdominal viscera. The Doctor gave as 50 per cent. of all women and 20 per cent. of all men coming under his observation as being more or less affected, being found at all ages, children not exempt. He spoke of the following being the causes of the disease:—1. Congenital predisposition, where daughters and sons often suffer. 2. Inanition following acute fevers. 3. Tight fitting dresses and corsets. 4. Frequent pregnancy. Treatment consisted not alone in properly applying adhesive plasters or bandages to the abdomen but the use of tonics, proper food, etc., as well as control of the mind must be adjuncts to treatment. He did not approve transfixion of organs by surgical means.

Dr. R. T. Sloan opened the discussion. He believed that when all other methods failed, the case should be handed over to the surgeon. Others taking part in the discussion were Doctors Rob Schaufler, F. W. Froehling, H. O. Leonard and A. E. Hertzler. Dr. Wolf closed the discussion.

The Society then passed into executive session to transact such business as might come before it.

## MEETING OF MARCH 26TH.

This being the last meeting of the month it was devoted exclusively to the presentation of patients, pathological specimens and instruments.

1. Dr. Taylor demonstrated an electric pad, or appliance, to be used in place of hot water bottle; also a heat radiator which furnished heat by means of light rays.

2. Dr. Edmonson presented a case of club foot (double equino varius) demonstrating a brace of his own devise which was controlled by coil spring. Treatment seemed to be effectual. Dr. Binnie in speaking favored operation on these cases.

3. Dr. Hugh Miller presented a case of acute catarrhal sinusitis in a man 23 years old; treatment had been local with good results. Doctors J. W. Sherer and B. E. Fryer discussed this case.

4. Dr. F. W. Froehling next presented a specimen of carcinoma of the jejunum; he also read a short paper which he had prepared relative to the case, laying special stress upon the difficulty in diagnosis as to locality of tumor. Dr Binnie, in opening the discussion, reported an interesting case of carcinoma of the pancreas. Others discussing the case were Doctors R. T. Sloan, St. Elmo Sanders, R. M. Schaufler, P. C. Hyde, Dr. Froehling then made a few closing remarks.

5. Dr. E. R. Curry next presented a parturient uterus which was so complicated with large fibroids especially near the os, as to necessitate its removal. In addition to presenting the specimen the doctor gave a most interesting report of the case. Doctors H. O. Leonard opened the discussion. Others speaking were Doctors Sanders, Van Eman, Brunig, McCrear and C. M. Fulton. Dr. Curry then closed the discussion. E. L. STEWART, M. D., Secretary.

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KNOX COUNTY MEDICAL SOCIETY.

Knox County Medical Society met in regular session on April 1st.

A motion was made that the secretary be exempted from payment of annual dues. Carried.

Dr. A. R. Wilsey of Hurdland, read a very interesting paper on the treatment of rheumatism. The paper was discussed by all present.

Dr. F. E. Luman of Barnes, read a paper entitled "The Doctor as a Business Man." This paper was also thoroughly discussed.

Dr. A. R. Wilsey of Hurdland was commissioned to read a paper at the Jefferson City meeting.

The following officers were elected: President, Dr. L. S. Brown (reelected); vice-president, Dr. J. R. Northcutt; secretary-treasurer, Dr. H. Jurgens; Censor for three years, Dr. F. E. Luma, Baring. Delegate Dr. A. R. Wilsey, Hurdland.—H. JURGENS, M. D., Secretary.

## LAFAYETTE COUNTY MEDICAL SOCIETY.

The regular meeting of Lafayette County Medical Society was held at Higginsville, March 12th. The attendance was unusually good.

The Society decided to employ an attorney to assist in the collection of evidence against and the prosecution of several illegal and criminal practitioners said to be practicing in our county at present.

A resolution passed unanimously to make \$5.00 the minimum fee for old line Life Insurance examinations.—C. T. RYLAND, M. D., Secretary.

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## SHELBY COUNTY MEDICAL SOCIETY.

The Shelby County Medical Society met at Shelbyna, March 29th. Owing to bad roads and poor attendance officers were not elected at the proper time, hence the election of officers at this meeting. The following were elected: President, Dr. J. D. Smith, Shelbyna; vice-president, Dr. D. A. Dobson, Hunnewell; secretary-treasurer, A. M. Wood, Lentner; Delegate, Chas. Chapman, Shelbyna; Censors, W. W. Owen, three years, Oak Dale; J. R. Daniel, two years, Clarence; R. E. Maupin, 1 year, Shelbyville.

Dr. Dallas reported case simulating Grave's disease in a girl aged 16, whose mother had died of the disease. Patient is improving under treatment.

Dr. Singleton presented a 22 months old child who had had laryngeal diphtheria which necessitated tracheotomy. On the fourth day paralysis of throat muscles occurred. Nourishment by stomach and rectal tubes was introduced for ten days after which recovery was good. A good discussion on diphtheria followed.

Adjourned to meet in April.—A. M. Wood, Reporter.

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## ST. LOUIS COUNTY MEDICAL SOCIETY.

The St. Louis County Medical Society met on April 13th, at Kirkwood with nineteen members present. Dr. August Maisch, of Manchester, was elected to membership.

Dr. R. D. Moore read a paper entitled "The Modern View of Immunity" which was followed by a paper by Dr. R. C. Forsyth along similar lines entitled "The Present State of Serum Therapy."

A good program is assured for the meeting in May.—R. D. MOORE, M. D., Reporter.

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## ST. LOUIS MEDICAL SOCIETY.

The recently organized Ophthalmic Section of the St. Louis Medical Society held its inaugural meeting February 13, 1907, in the boardroom of the Medical Library Building, 3525 Pine street.



The interest manifested by the ophthalmologists of the society in this section is attested by the fact that 19 out of a total present membership of 25 were present.

The chairman, Dr. Barck, made a few introductory remarks pointing out the need of an organization like the Ophthalmic Section to supply the scientific requirements of specialist members in a general medical body. He felt that nothing but good could accrue from this move and asked the hearty co-operation of the members in the scientific work of the section.

Dr. W. A. Shoemaker presented a patient with a gun-shot wound of the globe, and exhibited x-ray photographs.

Dr. J. M. Ball presented a patient with diabetic retinitis.

Dr. Wiener spoke of the x-ray localization of foreign body within the globe, by Sweet's method.

In the discussion, Dr. Wells, Roentgenologist to the Skin and Cancer Hospital, demonstrated Sweet's method together with a valuable modification of his own. At the conclusion of the discussion Dr. Wells was invited by the section to prepare a formal paper on Sweet's method as modified by him for presentation at the next meeting.

Dr. N. M. Semple described an operation for the relief of symblepharon, with the aid of paraffine plates.

Dr. Green demonstrated the astigmatic charts of Dr. F. H. Verhoeff.

Dr. Ball read a paper entitled "A Sketch of the Life of George Frick," (author of the first American text-book on ophthalmology).

The following members were present: Drs. Barck, Charles, Jennings, C. Loeb, Muetze, Buckwalter, Gross, Henderson, Higbee, Semple, Williamson, Luedde, Owen, Reinders, C. W. Parker, Wiener, W. A. Shoemaker, J. M. Ball, John Green, Jr. Visitors: Drs. Hoge, Wells, Wm. W. Graves.

# OFFICIAL ROSTER

## Missouri State Medical Association

ORGANIZED 1857

### Members of Affiliated County Societies

#### ADAMIR COUNTY.

Barnes, F. M., Brashcar, Mo.  
 Bulkley, J. F., Loeffler, Mo.  
 Callison, E. C., Kirksville, Mo.  
 Duffie, W. M., Milard, Mo.  
 Grim, E. A., Kirksville, Mo.  
 Grim, E. C., Kirksville, Mo.  
 Gashwiler, J. S., Novinger, Mo.  
 Hall, W. S., Novinger, Mo.  
 Hanks, James, Brashcar, Mo.  
 Jurgins, L. P., Kirksville, Mo.  
 Martin, J. W., Kirksville, Mo.  
 McConnell, J. L., Connelssville, Mo.  
 Martin, W. W., Sperry, Mo.  
 Munn, W. E., Pure Air, Mo.  
 Noe, L., Connelssville, Mo.  
 Nunn, J. C., Novinger, Mo.  
 Sparling, G. A., Kirksville, Mo.  
 Wilson, C. S., Green City, Mo.  
 Williams, J. W., Kirksville, Mo.

#### ANDREW COUNTY.

Allen, C. L., Casby, Mo.  
 Balckow, F. D., Avenue City, Mo.  
 Darley, W. E., Avenue City, Mo.  
 Bennett, E. C., Bolckow, Mo.  
 Best, W. W., Bolckow, Mo.  
 Bryant, D. B., Savannah, Mo.  
 Bailey, W. H., Savannah, Mo.  
 Beever, S. S., Amazonia, Mo.  
 Carpenter, E. H., Helena, Mo.  
 Hasher, J. C., Rosendale, Mo.  
 Jefferies, C. O., Savannah, Mo.  
 Kerr, W. M., Savannah, Mo.  
 Keeley, R. R., Amazonia, Mo.  
 Martin, W., Savannah, Mo.  
 Mallison, J. O., Bolckow, Mo.  
 Miles, B. E., Filmore, Mo.  
 Myer, W. C., Savannah, Mo.  
 Parks, D. V., Filmore, Mo.  
 Southerland, J. C., Savannah, Mo.

#### ATCHISON COUNTY.

Chamberlain, G. W. E., Rockport, Mo.  
 Chamberlain, O. M. C., Rockport, Mo.  
 Holliday, J. A., Tarkio, Mo.  
 Hunter, J. A., Fairfax, Mo.  
 Hunter, Owen A., Fairfax, Mo.  
 Lewis, A. E., Rockport, Mo.  
 Lott, G. W., Westboro, Mo.  
 McMichael, A., Rockport, Mo.  
 Postlewaite, J. A., Tarkio, Mo.  
 Richards, E. E., Tarkio, Mo.  
 Safford, W. G., Tarkio, Mo.  
 Settles, Chas. T., Rockport, Mo.  
 Strickland, W. R., Rockport, Mo.  
 Taylor, E. P., Fairfax, Mo.  
 Waugh, C. M., Tarkio, Mo.  
 Whiteford, E. P., Westboro, Mo.

#### AUDRAIN COUNTY.

Berry, R. W., Mexico, Mo.  
 Bland, W. W., Vandalia, Mo.  
 Cave, E. S., Mexico, Mo.  
 Coil, P. E., Mexico, Mo.  
 Cooper, J. C., Rowena, Mo.  
 Cornett, W. E., Rush Hill, Mo.  
 Crawford, M. E., Mexico, Mo.  
 Douglass, W. H., Benton City, Mo.  
 Flynt, J. F., Moline, Mo.

Gibbs, R. T., Mexico, Mo.  
 Griffin, Fred, Mexico, Mo.  
 Lofton, E. A., Laddonia, Mo.  
 McCall, W. K., Worcester, Mo.  
 McFarland, W. W., Mexico, Mo.  
 Parish, J. C., Vandalia, Mo.  
 Rodes, N. R., Mexico, Mo.  
 Rodes, W. R., Mexico, Mo.  
 Rothwell, C. A., Mexico, Mo.  
 Toalson, G. F., Mexico, Mo.  
 Wallace, J. E., Mexico, Mo.

#### BARTON COUNTY.

Allee, G. D., Lamar, Mo.  
 Brown, C. F., Lamar, Mo.  
 Brooks, J. M., Golden City, Mo.  
 Coleman, W. O., Nashville, Mo.  
 Duckett, T. H., Millford, Mo.  
 Gish, G. J. P., Minden Mills, Mo.  
 Guthrie, J. F., Golden City, Mo.  
 Griffin, W. L., Lamar, Mo.  
 Locker, G. E., Iantha, Mo.  
 McComb, J. L., Lamar, Mo.  
 Miller, E. F., Verdella, Mo.  
 Stone, A. B., Lamar, Mo.  
 Van Meter, A., Lamar, Mo.  
 Warren, J. F., Boston, Mo.

#### BARRY COUNTY.

Bailey, W. T., Cassville, Mo.  
 Chandler, S. W., Cassville, Mo.  
 Dusenbury, C. T., Monett, Mo.  
 Gladden, R. B., Purdy, Mo.  
 Hagler, M. C., Monett, Mo.  
 Hawkins, A. S., Monett, Mo.  
 Jones, Alva, Monett, Mo.  
 Leath, L. R., Butterfield, Mo.  
 Miller, D. E., Monett, Mo.  
 Mitchell, D. L., Cassville, Mo.  
 Mitchell, John, Purdy, Mo.  
 Newman, S. A., Cassville, Mo.  
 Northcut, L. B., Washburn, Mo.  
 Pound, J. S., Shell Knob, Mo.  
 Russell, J. M., Monett, Mo.  
 Searcy, Wm. P., Exeter, Mo.  
 Trumbower, M. R., Monett, Mo.  
 West, Wm. M., Monett, Mo.

#### BATES COUNTY.

Boulware, T. C., Butler, Mo.  
 Chastain, E. N., Butler, Mo.  
 Comp'on, U. J., Pleasant Gap, Mo.  
 Forster, T. W., Butler, Mo.  
 Gilmore, E. E., Adrian, Mo.  
 Hulett, R. F., Rich Hill, Mo.  
 Lane, G. G., Sprague, Mo.  
 Lockwood, T. F., Butler, Mo.  
 Miller, Sherman, Ulrich, Mo.  
 Powers, C. E., Amoret, Mo.  
 Whipple, W. L., Pleasant Gap, Mo.  
 Williams, J. H., Hume, Mo.  
 Zey, E. G., Butler, Mo.

#### BENTON COUNTY.

Carl, C. A., Cross Timbers, Mo.  
 Davis, S. O., Warsaw, Mo.  
 Dick, M., Cole Camp, Mo.  
 Dillon, Marion, Fairfield, Mo.  
 Greeson, G. A., Lincoln, Mo., R. F. D.  
 Holtzen, E. E., Cole Camp, Mo.  
 Jones, W. G., Lincoln, Mo.

Rhodes, E. L., Lincoln, Mo.  
Savage, H. G., Warsaw, Mo.  
Stratton, S. O., Edmonson, Mo.  
Walton, J. H., Ionia, Mo.

BOONE COUNTY.

Angell, W. E., Rocheport, Mo.  
Austin, C. W., Columbia, Mo.  
Calvert, W. J., Columbia, Mo.  
Chinn, E. H., Rocheport, Mo.  
Fisher, J. M., Columbia, Mo.  
Gentry, E. N., Sturgeon, Mo.  
Gordon, J., Columbia, Mo.  
Hampton, Z. M., Centralia, Mo.  
Hickerson, T. J., Centralia, Mo.  
Jackson, C. M., Columbia, Mo.  
McAlester, A. W., Columbia, Mo.  
McAllister, W. A., Centralia, Mo.  
McComas, A. R., Sturgeon, Mo.  
Meyer, Max, Columbia, Mo.  
Miller, W. McN., Columbia, Mo.  
Moss, Woodson, Columbia, Mo.  
Nifong, F. G., Columbia, Mo.  
Norris, W. A., Columbia, Mo.  
Noyes, Guy, Columbia, Mo.  
Parmer, Chas. C., Hartsburg, Mo.  
Parmer, J. E., Hartsburg, Mo.  
Thornton, J. E., Columbia, Mo.

BUCHANAN COUNTY.

(All addresses St. Joseph, Mo., unless otherwise stated).

Bansbach, J. J., 823 Fred. Ave.  
Ballard, E. S., King Hill Bldg.  
Bauman, L. C., 4th & Edmond.  
Bell, J. M., 710 Felix St.  
Bigham, D. F., Easton, Mo.  
Bode, L. F., 520 S. 6th St.  
Bowen, J. K. P., Moss Bldg.  
Byrd, Chas. F., 2301 St. Joe Ave.  
Byrne, J. L., Bank of Commerce Bldg.  
Campbell, O. B., Hughes Bldg.  
Carpenter, S. F., Hughes Bldg.  
Cloud, S. E., 1302 N. 3rd.  
Dandurant, L. J., 8th & Felix St.  
Davis, E. C., 2018 S. 11th St.  
Davis, W. B., 518 Francis.  
Deffenbaugh, W. B., 710 Felix St.  
Donelan, E. A., 809 Francis St.  
Dowell, Robt. F., Agency, Mo.  
Doyle, T. H., 107 N. 9th. St.  
Doyle, J. M., 107 N. 9th St.  
Dunsmore, I. M., 9th & Charles St.  
Elam, W. T., Logan Bldg.  
Farber, M. J., 520½ Francis St.  
Fassett, Chas. Wood, Krug Park Pl.  
Ferguson, I. W., 710 Felix St.  
Forgrave, H. S., King Hill Bldg.  
Forgrave, L. R., Logan Bldg.  
French, J. A., 408 S. 8th St.  
Fulkerson, P. P., 6th & Francis St.  
Geiger, C. G., 613 Francis.  
Geiger, Jacob, 613 Francis St.  
Gebhart, O. C., King Hill Bldg.  
Gleaves, O. G., 3117 N. 11th St.  
Goetz, W. F., 7th & Edmond.  
Good, C. A., Logan Bldg.  
Graham, J. K., Logan Bldg.  
Gray, A. L., 122 S. 9th St.  
Green, H. A., 704 Felix St.  
Heddens, J. W., 614 Francis St.  
Holley, A. E., Rock Island Bldg.  
Hull, W. S., Faucett, Mo.  
Hunfreville, D. L., 518 Francis St.  
Islaub, J. W., 207 S. 14th St.  
Kenney, W. L., 6th & Felix St.  
Kessler, S. F., 720 Francis St.  
Lee, Herbert, Ballinger Bldg.  
Leonard, P. I., 613 Francis St.  
Lockwood, W. D., 407½ Illinois Ave.  
Long, L. S., 820 Edmond St.  
McCoy, I. H., 710 Felix St.  
McGill, W. J., King Hill Bldg.  
McGlothlin, A. B., 720 Francis St.  
McInerney, Joseph M., 4th & Edmond.  
Mayes, I. W., Easton, Mo.  
Minton, W. H., King Hill Bldg.  
Morton, Daniel, King Hill Bldg.  
Morrison, W. S., Rushville, Mo.  
Osborn, J. F., 2228 S. 6th St.

Owens, J. F., Ballinger Bldg.  
Patterson, Frederick A., 205 Hughes Bldg.  
Paul, T. M., 825 Fred. Ave.  
Pitts, Barton, Pitts Bldg.  
Potter, T. E., 7th & Edmond St.  
Reynolds, J. B., 417 Francis St.  
Richardson, W. H., Rock Island Bldg.  
Riley, J. B., Commercial Bldg.  
Sampson, Chris. M., 115 N. 5th St.  
Sampson, J. H., 115 N. 5th St.  
Senn, Geo., 9th & Jule St.  
Schmid, W. F., Pitts Bldg.  
Simcoe, Charles B., 613 Francis St.  
Smith, B. H., Hosp. No. 2.  
Smith, J. C., Hosp. No. 2.  
Spencer, F. H., Moss Bldg.  
Stamey, J. Thomas, 2624 St. Joe Ave.  
Thomas, C. E., Commercial Bldg.  
Thompson, G. R., Hosp. No. 2.  
Timerman, A. R., 4101½ Ill. Ave.  
Todd, L. A., Logan Bldg.  
Toothaker, B. W., Hughes Bldg.  
Walker, H. L., 926 N. 3rd St.  
Wallace, C. H., Logan Bldg.  
Willman, R., 301 N. 11th St.  
Woodson, C. R., Hosp. No. 2.  
Woodson, L. B., Rushville, Mo.

BUTLER COUNTY.

Cadwell, Victor, Poplar Bluff, Mo.  
Dewitt, Eskew, Poplar Bluff, Mo.  
Johnson, J. P., Fisk, Mo.  
Kendall, A. W., Poplar Bluff, Mo.  
Mott, J. W., Poplar Bluff, Mo.  
Norwine, J. J., Poplar Bluff, Mo.  
Rowe, A. R., Poplar Bluff, Mo.  
Scybold, Ira W., Poplar Bluff, Mo.  
Williamson, C. W., Poplar Bluff, Mo.  
Windor, A., Poplar Bluff, Mo.  
Wright, C. O., Poplar Bluff, Mo.

CALDWELL COUNTY.

No Report Received.

CALLAWAY COUNTY.

Baker, N. F., Fulton, Mo.  
Berry, J. W., Reform, Mo.  
Christian, C. H., New Bloomfield, Mo.  
Crews, R., M. Williamsburg, Mo.  
Davis, J. R., Mokane, Mo.  
Harrison, J. F., Fulton, Mo.  
McCall, G. D., Fulton, Mo.  
Moore, J. G., Fulton, Mo.  
Roots, G. F., Tebbitts, Mo.  
Williams, P. E., Fulton, Mo.  
Yates, Martin, Fulton, Mo.  
Young, D. H., Fulton, Mo.

CAMDEN COUNTY.

Claiborn, E. G., Decaturville, Mo.  
Clark, W. J., Linn Creek, Mo.  
Ford, J. S., Linn Creek, Mo.  
Hicks, E. S., Macks Creek, Mo.  
Mills, Sherman, Macks Creek, Mo.  
Moore, Geo. M., Linn Creek, Mo.  
Moulder, G. A., Linn Creek, Mo.  
Myers, G. T., Macks Creek, Mo.

CAPE GIRARDEAU COUNTY.

Adkins, R. F., Jackson, Mo.  
Chandler, J. J., Lutesville, Mo.  
Chostner, N. F., Dutchtown, Mo.  
Cunningham, H. L., Cape Girardeau, Mo.  
Dalton, A. E., Friedheim, Mo.  
Ellis, J. I., Oak Ridge, Mo.  
Hays, W. B., Jackson, Mo.  
Henderson, R. F., Cape Girardeau, Mo.  
Higdon, E. E., Allenville, Mo.  
Hope, D. H., Cape Girardeau, Mo.  
Howard, W. N., Cape Girardeau, Mo.  
Nettles, F., Cape Girardeau, Mo.  
Porterfield, J. D., Jr., Cape Girardeau, Mo.  
Rosenthal, M., Cape Girardeau, Mo.  
Sander, C. A., Marble Hill, Mo.  
Schultz, G. B., Cape Girardeau, Mo.  
Statler, W. K., Oak Ridge, Mo.  
Tarlton, G. W., Cape Girardeau, Mo.  
Vineyard, G. W., Jackson, Mo.  
Walker, G. W., Cape Girardeau, Mo.  
Wichetrich, R. F., Cape Girardeau, Mo.



Winters, H. S., Cape Girardeau, Mo.  
 Witmer, C. M., Marble Hill, Mo.  
 Wilson, E. H. G., Cape Girardeau, Mo.  
 Woods, S. E., Jackson, Mo.  
 Yount, W. E., Cape Girardeau, Mo.

## CARROLL COUNTY.

Baird, W. C., Bogard, Mo.  
 Boggs, J. D., Roads, Mo.  
 Brown, H. G., Bosworth, Mo.  
 Cook, R. F., Carrollton, Mo.  
 Cooper, J. C., Carrollton, Mo.  
 Craton, M. W., Carrollton, Mo.  
 Highsmith, G. R., Carrollton, Mo.  
 Miller, R. M., Bogard, Mo.  
 Samuels, L., Carrollton, Mo., R. F. D. No. 6.  
 Stephenson, J. T., Tina, Mo.  
 Tull, H. W., Carrollton, Mo.

## CARTER-SHANNON COUNTY.

No Report Received.

## CASS COUNTY.

Adair, T. W., Archie, Mo.  
 Anderson, G. M., Pleasant Hill, Mo.  
 Barrett, W. H., Harrisonville, Mo.  
 Beckman, Wm. S., Strassburg, Mo.  
 Brierly, H. A., Peculiar, Mo.  
 Burney, R. H., Freeman, Mo.  
 Chaffin, W. F., Raymore, Mo.  
 Clemons, W. M., Cleveland, Mo.  
 Conger, D. W., Harrisonville, Mo.  
 Crawford, H. S., Harrisonville, Mo.  
 Elder, A. R., Harrisonville, Mo.  
 Ellis, F. B., Garden City, Mo.  
 Farnsworth, A. D., Drexel, Mo.  
 Farrow, G. W., East Lynne, Mo.  
 Foster, F. W., East Lynne, Mo.  
 Hammond, Mart, Raymore, Mo.  
 Jerard, H., Pleasant Hill, Mo.  
 Keller, K. G., Freeman, Mo.  
 Loat, B. B., Archie, Mo.  
 Overholser, M. P., Harrisonville, Mo.  
 Palmer, W. C., Dayton, Mo.  
 Prentiss, H. S., Pleasant Hill, Mo.  
 Ramey, R. D., Garden City, Mo.  
 Rhoades, M. H., Austin, Mo.  
 Schoor, A. H., Adrian, Mo.  
 Schoor, E., Garden City, Mo.  
 Smith, A. M., Pleasant Hill, Mo.  
 Triplett, J. S., Harrisonville, Mo.  
 Yeagle, R. P., Pleasant Hill, Mo.

## CEDAR COUNTY.

Brown, R. A., Stockton, Mo.  
 Crawford, R. O., El Dorado Springs, Mo.  
 Dawson, J. W., El Dorado Springs, Mo.  
 Dunnaway, L. T., Caplinger Mills, Mo.  
 Edgar, C. A., El Dorado Springs, Mo.  
 Hill, K., Eldorado Springs, Mo.  
 Holmes, A. T., Jerico, Mo.  
 Liston, E. H., Balm, Mo.  
 Marr, R. B., Filley, Mo.  
 Mynott, A. J., Jerico Springs, Mo.

## CHARITON COUNTY.

Austin, M. B., Salisbury, Mo.  
 Banning, T. F., Salisbury, Mo.  
 Billeter, W. I., Bynumville, Mo.  
 Brown, G. W., Triplett, Mo.  
 Brummall, J. D., Salisbury, Mo.  
 Baker, W. L., Salisbury, Mo.  
 Dewey, W. T., Keytesville, Mo.  
 Epperly, R. G., Prairie Hill, Mo.  
 Gaines, J. R., Mussell Fork, Mo.  
 Hardy, J. W., Sumner, Mo.  
 Hawkins, G. W., Triplett, Mo.  
 Jennings, C. A., Salisbury, Mo.  
 Knott, J., Keytesville, Mo.  
 Kirkpatrick, H. E., Salisbury, Mo.  
 Lawhorn, C. W., Forest Green, Mo.  
 Lewis, A. L., Salisbury, Mo.  
 McAdam, J. D., Prairie Hill, Mo.  
 McEwen, Oliver, Shannondale, Mo.  
 Parker, I. H. P., Salisbury, Mo.  
 Pitney, Orville, Forest Green, Mo.  
 Tatum, Harry C., Brunswick, Mo.  
 Temple, C. H., Rockford, Mo.  
 Todd, W. T., Forest Green, Mo.

Wallace, J. S., Brunswick, Mo.  
 Welch, J. F., Salisbury, Mo.

## CHRISTIAN COUNTY.

Brown, F. H., Billings, Mo.  
 Bruton, J. W., Ozark, Mo.  
 Chatham, R. F., Clever, Mo.  
 Farthing, R. R., Sparta, Mo.  
 Lacer, T. R., Billings, Mo.  
 Nagel, P. E., Billings, Mo.  
 Robertson, J. A., Ozark, Mo.  
 Smith, W. L., Sparta, Mo.  
 Young, J. C., Ozark, Mo.

## CLARK COUNTY.

Bridges, J. R., Kahoka, Mo.  
 Callihan, R. G., Luray, Mo.  
 Crumley, A. C., Wyaconda, Mo.  
 Geeslin, P. A., Luray, Mo.  
 Haase, Freeman, Revere, Mo.  
 Hiller, F. B., Kahoka, Mo.  
 Hinron, C. A., Revere, Mo.  
 Rebo, L. A. S., Alexandria, Mo.  
 Reesc, H. S., Wayland, Mo.  
 Sisson, W. B., Kahoka, Mo.  
 Teel, A. W., Kahoka, Mo.  
 Young, J. A., Wyaconda, Mo.

## CLAY COUNTY.

Allen, J. M., Liberty, Mo.  
 Ashley, M. A., Excelsior Springs, Mo.  
 Bogart, T. N., Excelsior Springs, Mo.  
 Fulton, F. H., Lathrop, Mo.  
 Gaines, J. J., Excelsior Springs, Mo.  
 Griffin, J. M., Excelsior Springs, Mo.  
 Jones, H. S., Linden, Mo.  
 Jones, J. L., Linden, Mo.  
 Lightfoot, F., Excelsior Springs, Mo.  
 Lowrey, Ernest, Excelsior Springs, Mo.  
 Mathews, F. H., Liberty, Mo.  
 Miller, E. H., Liberty, Mo.  
 Sevier, R. E., Liberty, Mo.  
 Suddarth, C. H., Smithville, Mo.  
 Ralph, A. B., Missouri City, Mo.  
 Rice, J. T., Excelsior Springs, Mo.  
 Rice, J. J., Kearney, Mo.  
 Rothwell, J. H., Liberty, Mo.  
 Rowell, H., Kearney, Mo.  
 Tadlock, H. L., Holt, Mo.  
 Wallace, W. S., Excelsior Springs, Mo.  
 Ward, T. J., Birmingham, Mo.

## CLINTON COUNTY.

Colley, E. A., Plattsburg, Mo.  
 Franklin, J. A., Cameron, Mo.  
 Kay, John, Perrin, Mo.  
 Loughfield, Jesse, Turney, Mo.  
 Peters, M. L., Cameron, Mo.  
 Rea, Robt. W., Plattsburg, Mo.  
 Rush, G. B., Lathrop, Mo.  
 Steckman, P. M., Plattsburg, Mo.  
 Sturgis, John, Perrin, Mo.

## COLE COUNTY.

Bedford, S. V., Jefferson City, Mo.  
 Clark, W. A., Jefferson City, Mo.  
 Enloe, C. F., Jefferson City, Mo.  
 Ettmueller, G., Jefferson City, Mo.  
 Hill, J. A., Jefferson City, Mo.  
 Hough, C. P., Jefferson City, Mo.  
 Leach, I. N., Jefferson City, Mo.  
 Martin, J. B., Jefferson City, Mo.  
 Myers, H. C., Jefferson City, Mo.  
 Norwood, W. W., Jefferson City, Mo.  
 Sneed, C. M., Jefferson City, Mo.  
 Son, E. R., Jefferson City, Mo.  
 Thorpe, J. L., Jefferson City, Mo.

## COOPER COUNTY.

Barnes, H. T., Pilot Grove, Mo.  
 Barnes, W. S., Pilot Grove, Mo.  
 Cochran, O. W., Gooch Mill, Mo.  
 Elliott, W. H., Bunceon, Mo.  
 Evans, R. L., Boonville, Mo.

Hurt, P. L., Boonville, Mo.  
 Lionberger, J. R., Boonville, Mo.  
 McDonald, H. A., Pisgah, Mo.  
 Meredith, A. L., Wooldridge, Mo.  
 Monroe, A. E., Otterville, Mo.  
 Nelson, A. W., Bunceton, Mo.  
 Pendleton, T. O., Pilot Grove, Mo.  
 Smiley, F. R., Boonville, Mo.  
 Smith, A. J., Boonville, Mo.  
 Van Ravenswaay, C. H., Boonville, Mo.

CRAWFORD COUNTY.

No Report Received.

DAVISS COUNTY.

Brosius, W. L., Gallatin, Mo.  
 Cox, J. L., Winston, Mo.  
 Henry, Anna M., Pattonsburg, Mo.  
 Jarrett, S. S., Pattonsburg, Mo.  
 Parker, J. Z., Pattonsburg, Mo.  
 Songer, H. E., Jamesport, Mo.  
 Wetzell, N. M., Jameson, Mo.

DE KALB COUNTY.

Clark, Wm. J., Maysville, Mo.  
 Elliott, J. R., Clarksdale, Mo.  
 Evans, R. A., Amity, Mo.  
 Farmer, A. O., Union Star, Mo.  
 Gale, W. S., Osborne, Mo.  
 Kimberlin, J. T., Clarksdale, Mo.  
 Lee, L. E., Weatherby, Mo.  
 Perkins, O. L., Union Star, Mo.  
 Quinn, J. C., Clarksdale, Mo.  
 Reynolds, E. M., Union Star, Mo.  
 Richey, L. A., Fairport, Mo.  
 Saunders, L. E., Stewartville, Mo.  
 Small, J. F., Stewartville, Mo.  
 Strump, E. R., Weatherby, Mo.  
 Yoster, H. P., Maysville, Mo.

DENT COUNTY.

Arthur, S. F., Lecoma, Mo.  
 Conway, R. H., Mounce, Mo.  
 Calhoun, D. S., Sligo, Mo.  
 Craig, L. B., Salem, Mo.  
 Cummings, W. P., Salem, Mo.  
 Duncan, E. A., Salem, Mo.  
 Gordon, J. B., Glia, Mo.  
 Hunt, T. G., Lenox, Mo.  
 Lenar, W. M., Lake Spring, Mo.  
 McMurtrey, A. F., Salem, Mo.  
 Rudd, W. E., Salem, Mo.  
 Welch, J. C., Salem, Mo.

DUNKLIN COUNTY.

Baldwin, Paul, Bennett, Mo.  
 Bond, V. H., Cotton Plant, Mo.  
 Egbert, T. H., Kennett, Mo.  
 Finney, W. B., Kennett, Mo.  
 Harrison, A. S., Kennett, Mo.  
 Johnson, G. L., Kennett, Mo.  
 Kelley, N. F., Kennett, Mo.  
 Mobley, A. B., Kennett, Mo.  
 Rigdon, T. J., Kennett, Mo.

FRANKLIN COUNTY.

Booth, H. A., Pacific, Mo.  
 Briegleb, C. F., St. Clair, Mo.  
 Brown, A. C., Moselle, Mo.  
 Dunnigan, J. P., Sullivan, Mo.  
 Eimbeck, Wm. F., New Haven, Mo.  
 Hempker, W. H., Catawissa, Mo.  
 Hume, E. L., Bourbon, Mo.  
 Kitchell, W. E., St. Clair, Mo.  
 Lane, A., Sullivan, Mo.  
 Mankopf, B. E., New Haven, Mo.  
 May, H. A., Washington, Mo.  
 McMay, A. L., Pacific, Mo.  
 Isbell, J., Washington, Mo.  
 North, W. R., Labadie, Mo.  
 Poppenhusen, H. A., Washington, Mo.  
 Rusk, E. McD., Villa Ridge, Mo.  
 Rusk, J. A., Gray Summit, Mo.  
 Schudde, O. N., Sullivan, Mo.  
 Smith, Augusta, Pacific, Mo.  
 Snow, A. E., Union, Mo.

GASCONADE-MARIES-OSAGE.

Aufderheid, F., Farmersville, Mo.  
 Burgess, J. W., Farmersville, Mo.  
 Engelbrecht, John, Farmersville, Mo.  
 Ferrell, J. J., Farmersville, Mo.  
 Ferrell, W., Farmersville, Mo.  
 Neiweg, J. W., Farmersville, Mo.  
 Radamacker, J. J., Farmersville, Mo.  
 Seba, E. W., Farmersville, Mo.  
 Seba, J. D., Bland, Mo.  
 Spurgeon, M. E., Farmersville, Mo.  
 Terrill, S. J., Farmersville, Mo.

GENTRY COUNTY.

Barger, J. N., Darlington, Mo.  
 Brooks, W. N., Stanberry, Mo.  
 Crockett, J. F., Stanberry, Mo.  
 Conrad, J. W., Albany, Mo.  
 Landis, H. B., King City, Mo.  
 Lindley, E. R., Stanberry, Mo.  
 Martin, W. S., Albany, Mo.  
 Patton, C. O., Stanberry, Mo.  
 Patton, H. J., McFall, Mo.  
 Smith, G. W., Albany, Mo.  
 Whitely, G. W., Albany, Mo.

GREENE COUNTY.

Armstrong, A., Springfield, Mo.  
 Barnes, G. W., Springfield, Mo.  
 Bartlett, J. R., Springfield, Mo.  
 Beers, E. G., Springfield, Mo.  
 Boyd, J. R., Springfield, Mo.  
 Camp, W. A., Springfield, Mo.  
 Carter, O. N., Springfield, Mo.  
 Clark, J. W., Springfield, Mo.  
 Coffelt, T. A., Springfield, Mo.  
 Cowan, R. M., Springfield, Mo.  
 Cox, Lee, Springfield, Mo.  
 Crane, T. V. B., Springfield, Mo.  
 Elkins, B. C., Springfield, Mo.  
 Evans, E. C., Springfield, Mo.  
 Evans, E. L., Springfield, Mo.  
 Farnsworth, D. B., Springfield, Mo.  
 Fortner, B. F., Springfield, Mo.  
 Fulbright, J. H., Springfield, Mo.  
 Fulton, C. E., Springfield, Mo.  
 Fuson, F. B., Springfield, Mo.  
 Hill, H. S., Springfield, Mo.  
 James, W. C., Springfield, Mo.  
 Keer, U. F., Springfield, Mo.  
 Knabb, E., Springfield, Mo.  
 McClure, L. E., Springfield, Mo.  
 Matthews, J. C., Springfield, Mo.  
 Mayfield, M. H., Springfield, Mo.  
 Nixon, J. H., Springfield, Mo.  
 Oldham, J. D., Springfield, Mo.  
 Ormsbee, J. L., Springfield, Mo.  
 Patterson, W. P., Springfield, Mo.  
 Peak, O. L., Springfield, Mo.  
 Perry, J. K., Springfield, Mo.  
 Purselley, W. L., Springfield, Mo.  
 Ralston, J. P., Springfield, Mo.  
 Rienhoff, Wm., Springfield, Mo.  
 Sherman, D. U., Springfield, Mo.  
 Smith, W. M., Springfield, Mo.  
 Tefft, J. E., Springfield, Mo.  
 Terry, N. F., Springfield, Mo.  
 Tickle, S. W., Springfield, Mo.  
 Williams, J. W., Springfield, Mo.  
 Williams, N. C., Springfield, Mo.  
 Wilber, A. F., Springfield, Mo.  
 Woody, C. E., Springfield, Mo.

GRUNDY COUNTY.

Coon, D. W., Trenton, Mo.  
 Davenport, R. G., Trenton, Mo.  
 Elder, A. L., Trenton, Mo.  
 Fulkerson, W. D., Trenton, Mo.  
 Sutton, Bertha, Trenton, Mo.  
 Webster, C. L., Trenton, Mo.  
 Wright, J. B., Trenton, Mo.

HARRISON COUNTY.

Broyles, F. H., Bethany, Mo.  
 Bryson, E. H., Bethany, Mo.  
 Chipp, J. K., New Hampton, Mo.  
 Dunkerson, E., Hatfield, Mo.

Eades, M. H., New Hampton, Mo.  
 Ferguson, R. E., Gilman City, Mo.  
 Gwinn, G. E., Bethany, Mo.  
 Mitchell, A. C., Bethany, Mo.  
 Morroway, J. H., Ridgeway, Mo.  
 Reynolds, A. C., Martinsville, Mo.  
 Robertson, C. H., Eagleville, Mo.  
 Shibley, John, Gilman City, Mo.  
 Stewart, B. S., Bethany, Mo.  
 Swint, Wm., Gilman City, Mo.  
 Vandivere, A. H., Bethany, Mo.  
 Walker, Jackson, Bethany, Mo.  
 Wiley, W. H., Ridgeway, Mo.  
 Williams, A. W., Ridgeway, Mo.

## HENRY COUNTY.

Barr, B. B., Clinton, Mo.  
 Beaty, J. G., Huntingdale, Mo.  
 Benway, Wm. H., Deepwater, Mo.  
 Blackmore, F. A., Windsor, Mo.  
 Bradley, W. P., Clinton, Mo.  
 Britts, J. H., Clinton, Mo.  
 Derwent, A. E., Clinton, Mo.  
 Douglass, F. M., Clinton, Mo.  
 Gibbins, Wm. H., Clinton, Mo.  
 Gray, A. A., Calhoun, Mo.  
 Haire, R. D., Clinton, Mo.  
 Hampton, J. R., Clinton Ford, R. F. D.  
 Mennees, G. W., Clinton, Mo.  
 Head, G. W., Windsor, Mo.  
 Miner, J. M., Montrose, Mo.  
 Peilor, Edwin C., Coal, Mo.  
 Poague, S. A., Clinton, Mo.  
 Russell, J. J., Deepwater, Mo.  
 Shankland, W. M., Clinton, Mo.  
 Wallis, J. R., Clinton, Mo.

## HOLT COUNTY.

Bullock, F. E., Forest City, Mo.  
 Chandler, J. F., Forest City, Mo.  
 Davis, J. M., Craig, Mo.  
 Davis, T. O., Maitland, Mo.  
 Evans, C. L., Oregon, Mo.  
 Gray, M. S., Craig, Mo.  
 Kaltenbach, E., Craig, Mo.  
 Miller, E. E., Mound City, Mo.  
 Miller, E. M., Mound City, Mo.  
 Miller, J. W., Mound City, Mo.  
 Proud, W. C., Oregon, Mo.  
 Quigley, B. T., Mound City, Mo.  
 Simmons, B. B., Oregon, Mo.  
 Tracy, J. M., Mound City, Mo.  
 Tracy, J. C., Mound City, Mo.  
 Williams, Ira, Maitland, Mo.  
 Wood, W. S., Oregon, Mo.

## HOWARD COUNTY.

Bonham, O. V., New Franklin, Mo.  
 Burgwin, A. B., Fayette, Mo.  
 Champion, J. R., Hildale, Mo.  
 Drake, C. F., Boonesboro, Mo.  
 Givens, H. K., Fayette, Mo.  
 Halsey, F. J., Franklin, Mo.  
 Hume, J. G., Armstrong, Mo.  
 Jordan, J. E., New Franklin, Mo.  
 Lee, C. H., Fayette, Mo.  
 Lewis, C. O., Fayette, Mo.  
 McLee, C. P., Fayette, Mo.  
 Myers, C. P., Fayette, Mo.  
 Prichett, W. M., Glasgow, Mo.  
 Richards, F. C., Fayette, Mo.  
 Smith, Paul C., Fayette, Mo.  
 Smith, N. E., Fayette, Mo.  
 Thompson, W. G., Armstrong, Mo.  
 Watts, C. W., Fayette, Mo.  
 White, J. A., New Franklin, Mo.  
 Wood, J. E., Harrisburg, Mo.  
 Wright, U. S., Fayette, Mo.

## HOWELL COUNTY.

Bingham, J. N., Portersville, Mo.  
 Davis, J. C. B., Willow Springs, Mo.  
 Dixon, J. C. B., West Plains, Mo.  
 Elben, J. L., Alton, Mo.  
 Johnson, J. McB., West Plains, Mo.  
 Nichols, D. J., West Plains, Mo.  
 Piles, J. C., Alton, Mo.  
 Reiley, J. F., West Plains, Mo.

Rowe, H. J., Willow Springs, Mo.  
 Schutte, H. C., West Plains, Mo.  
 Spears, R. S., West Plains, Mo.  
 Thompson, H. A., Lanton, Mo.  
 Thornburg, A. H., West Plains, Mo.

## IRON COUNTY.

No Report Received.

## JACKSON COUNTY.

(All addresses are Kansas City unless otherwise stated).

Adams, Noah, 317 Rialto Bldg.  
 Alibritain, J. W., 24th & Holly.  
 Anderson, H. C., 716 Shukert Bldg.  
 Anderson, E., 915 W. 17th St.  
 Armour, Wallace A., 3505 E. Twelfth St.  
 Atkins, Calvin, Independence, Mo.  
 Beattie, Thos. J., 603 Commercial Bldg.  
 Beedle, G. A., 314 Altman Bldg.  
 Beil, J. W., 805 McGee St.  
 Binnie, J. F., Twelfth & Wyandotte.  
 Blakesley, Theo, 100 Rialto Bldg.  
 Block, J., 502 Commerce Bldg.  
 Boswell, A. C., 2301 Summit St.  
 Bowman, Dora E., 327 Rialto Bldg.  
 Bowman, J. W., 402 Hall Bldg.  
 Brainerd, B. F., Martin City, Mo.  
 Brewster, R. B., 422 Argyle Bldg.  
 Brown, Chas. A., 311 Commerce Bldg.  
 Bruchl, J., 500 New Ridge Bldg.  
 Brunig, F. H., 3137 Main St.  
 Burkhart, E. A., 2309 Summitt St.  
 Burroughs, A., 2317 College Ave.  
 Burnet, S. G., 425 Rialto Bldg.  
 Burrill, C. W., 623 Shukert Bldg.  
 Callaghan, R., Cambridge Ave.  
 Campbell, W. L., Fifteenth & Jackson.  
 Carbaugh, Eugene, 430 Rialto Bldg.  
 Carl, S. T., 350 Ridge Bldg.  
 Carver, H. N., 2805 E. 12th St.  
 Castelow, R. E., 13 Woodworth Ave.  
 Cathcart, C. P., 419 Deardorff Bldg.  
 Chambers, J. O., 709 Shukert Bldg.  
 Chambliss, E. L., 523 Rialto Bldg.  
 Child, Scott P., 705 Shukert Bldg.  
 Clausen, J. J., 2311 Summitt Bldg.  
 Coffey, W. H., 500 Bellefontaine.  
 Cook, F. L., Blue Springs, Mo.  
 Cordier, A. H., 310 Rialto Bldg.  
 Cross, R. O., 317 Rialto Bldg.  
 Cross, W. M., 1005 Campbell St.  
 Crowder, W. H., 4647 Independence.  
 Curry, E. R., 304 Deardorff Bldg.  
 Curdy, R. J., 614 Commerce Bldg.  
 Lailey, F. W., 327 Altman Bldg.  
 Dannaker, C. A., 537 Woodland Ave.  
 Davis, A. W., 3303 Woodland Ave.  
 Davis, G. W., 407 Century Bldg.  
 Davis, S. J. T., 304 Deardorff Bldg.  
 Dod, Frederick L., 4646 Troost Bldg.  
 Donaldson, G. H., 200 Westport Ave.  
 Donaldson, J. E., 200 Westport Ave.  
 Dove, O. H., 413 Rialto Bldg.  
 Drake, N. A., 1001 Harrison St.  
 Edmonson, M. M., 2440 Brooklyn Ave.  
 Eldredge, J. S., 1021 Grand Ave.  
 Evans, F. H., Fifth & Troost Ave.  
 Eubank, A. E., 3021 South West Bl.  
 Faires, O. P., 1300 E. 8th St.  
 Fields, Tom, Eighteenth & Prospect Ave.  
 Field, W. S., 720 Shukert Bldg.  
 Foster, Hal, 402 Altman Bldg.  
 Frankenburger, J. M., 534 Rialto Bldg.  
 Freyman, A. A., 1201 Independence.  
 Freyman, J., 1201 Independence.  
 Frick, Wm., 301 Rialto Bldg.  
 Frick, W. L., 311 Commerce Bldg.  
 Froehling, F. W., 920 Holmes St.  
 Fryer, B. E., 520 E. Ninth St.  
 Fulton, A. L., 430 Deardorff Bldg.  
 Fulton, C. M., 534 Altman Bldg.  
 Gaines, J. W., 406 Rialto Bldg.  
 Goldman, Max, 309 Century Bldg.  
 Gosney, C. W., 718 Shukert Bldg.  
 Green, J. W., Independence, Mo.  
 Griffith, J. D., 522 Rialto Bldg.  
 Guffey, Don Carlos, 605 Bryant Bldg.  
 Hall, C. L., Bryant Bldg.  
 Hall, D. W., Bryant Bldg.  
 Hall, F. J., 288 Olive St.



Halley, George, Ridge Bldg.  
 Hamel, G. F., 706 West Tenth St.  
 Hamilton, H. D., 1806 E. Thirty-first St.  
 Hanawalt, H. O., 1214 Main St.  
 Hanna, M. A., 2711 Brooklyn St.  
 Hardin, C. B., Rialto Bldg.  
 Harrison, A., Lees Summit, Mo.  
 Harrelson, N. O., Rialto Bldg.  
 Harrington, J. L., 1021 Grand Ave.  
 Harrison, E. Lee, 307 Husted Bldg.  
 Hashinger, G. H., Rialto Bldg.  
 Hays, H. C., 310 Century Bldg.  
 Henderson, J. P., 426 Argyle Bldg.  
 Henry, F. J., 2203 Brooklyn Ave.  
 Hertzler, A. E., 508 Altman Bldg.  
 Hetherington, E. M., Altman Bldg.  
 Hickerson, J. C., Independence Ave  
 Hill, Howard, Rialto Bldg  
 Holbrook, R. W., 224 Bryant Bldg.  
 Horigan, J. A., 3100 Main St.  
 Howard, J. W., 805 McGee St.  
 Hoxie, G. H., 317 Argyle Bldg.  
 Hyde, B. C., 404 Bryant Bldg.  
 Irwin, C. B., 426 Ridge Bldg.  
 Iuen, F. J., 1334 Grand Ave.  
 Iuen, W. C., 1334 Grand Ave.  
 Jacobs, Ben, Altman Bldg.  
 Jackson, J. N., Rialto Bldg.  
 James, S. C., Rialto Bldg.  
 Jennett, H. N., 4603 E. Ninth St.  
 Johnson, Chas. R., General Hosp. Bldg.  
 Johnstone, P. A., Shukert Bldg.  
 Kanoky, J. P., 912 Walnut St.  
 Kelly, E. H., 2018 Prospect St.  
 Kepner, J. W., 720 Shukert Bldg.  
 King, W. E., 403 Commerce Bldg.  
 Kistler, J. R., 601 S. W. Blvd.  
 Kimberlin, J. W., 532 Altman Bldg.  
 Knox, A. G., 322 Altman Bldg.  
 Kreeger, Geo. C., Lone Jack, Mo.  
 Krimminger, C. E., Independence, Mo.  
 Kuhn, W. F., Farmington, Mo.  
 Lahfner, Ira B., 1336 Broadway.  
 Lake, N. E., Fourteenth & Summitt.  
 Lane, H. H., 800 S. W. Blvd.  
 Langsdale, J. M., Altman Bldg.  
 Laning, J. R., 623 Shukert Bldg.  
 Lapp, J. G., 203 Askew Bldg.  
 Laurantzana, Louis, Fifth & Cherry St.  
 Leverich, Leslie, Twelfth & Brooklyn Ave.  
 Leonard, H. O., 521 Shukert Bldg.  
 Leonard, W. H., 601 S. W. Blvd.  
 Lester, Chas. H., 601 Bryant Bldg.  
 Lewis, Ned O., Fourteenth & Grand Ave.  
 Lewis, J. K., 1212 Wyandotte Ave.  
 Lieberman, B. A., 1107 McGee Ave.  
 Logan, J. E., 1229 Wyandotte Ave.  
 Lowrey, W. J., 402 Hall Bldg.  
 Lusher, L. W., Twelfth & Grand Ave.  
 Lyle, H. M., 523 Altman Bldg.  
 Mallett, Eugene P., Twelfth & Wyandotte.  
 McAlester, A. W., 429 Argyle Bldg.  
 McArthur, A. W., 517 Shukert Bldg.  
 McBride, W. L., 503 Bryant Bldg.  
 McCall, H. B., 707 Shukert Bldg.  
 McCandless, O. H., 305 Altman Bldg.  
 McCrea, Maggie L., 526 Ridge Bldg.  
 McDonald, Chet, Rialto Bldg.  
 McDonald, P. L., 527 Rialto Bldg.  
 McKee, J. W., Rialto Bldg.  
 McKillip, O. L., 532 Altman Bldg.  
 McVey, Newton, Rialto Bldg.  
 Manko, E., Twelfth & Central.  
 Mann, A. W., Oak Grove, Mo..  
 Martin, H. L., 601 Twelfth St.  
 Martin, J. C., 3026 W. 23rd St.  
 Merriman, C. S., 2511 Forest Ave.  
 Middleton, James, 412 N. Mongall Ave.  
 Miller, Abram, Rialto Bldg.  
 Miller, Hugh, 1021 Grand Ave.  
 Montgomery, W. E., Rialto Bldg.  
 Morrow, C. J., Bryant Bldg.  
 Morrow, W. F., Altman Bldg.  
 Mott, J. S., Rialto Bldg.  
 Murphy, F. E., Deardorff Bldg.  
 Neff, F. C., Altman Bldg.  
 Newhouse, Stanley, 452 Ridge Bldg.  
 Norberg, G. B., 526 Altman Bldg.  
 O'Connor, C., 815 McGee St.  
 O'Donnell, A., 327 Altman Bldg.

O'Flaherty, A. E., 2807 E. 33rd St.  
 Owens, M. J., 603 S. W. Blvd.  
 Pearse, H. E., Rialto Bldg.  
 Parker, O. H., Twelfth & Central.  
 Perkins, J. W., Altman Bldg.  
 Pettijohn, N. J., 1310 Tracy Ave.  
 Phillips, E. T., 1019 Broadway.  
 Porter, A. L., Rialto Bldg.  
 Porter, D. R., Tenth & Washington Ave.  
 Punton, John, Altman Bldg.  
 Ralston, J. H., 1800 W. Twenty-ninth St.  
 Rathbone, F. W., Rialto Bldg.  
 Ragsdale, T. J., Lees Summitt, Mo.  
 Reed, W. M., Rialto Bldg.  
 Reynolds, W. T., 517 Shukert Bldg.  
 Rice, Wm., 402 Hall Bldg.  
 Richardson, K. B., Ridge Bldg.  
 Ridge, I. M., Ridge Bldg.  
 Ritter, C. A., Altman Bldg.  
 Roberts, C. F., 720 Shukert Bldg.  
 Roberts, C. S., Lees Summitt, Mo.  
 Robinson, W. G., 415 Argyle Bldg.  
 Robinson, E. F., Bryant Bldg.  
 Robinson, J. L., Altman Bldg.  
 Rogers, J. C., Rialto Bldg.  
 Rosenwald, Leon, Rialto Bldg.  
 Russell, E. L., 805 Altman Bldg.  
 Sams, W. M., 806 Independence.  
 Sanders, F. L., 517 Shukert Bldg.  
 Sanders, St. Elmo, Rialto Bldg.  
 Sawyer, J. F., Fifth & Lodie Ave.  
 Schauffler, E. W., Deardorff Bldg.  
 Scott, A. J., Ridge Bldg.  
 Sheldon, J. G., 405 Altman Bldg.  
 Sherer, J. W., 1208 Wyandotte Ave.  
 Skinner, E. H., 207 Commerce Bldg.  
 Sloan, R. T., Rialto Bldg.  
 Smith, A. E., University Bldg.  
 Smith, R. M., 203 E. Twelfth St.  
 Stephens, N. A., 813 E. Thirty-first St.  
 St. Clair, R. L., 115 Hardesty Ave.  
 Stevens, W. W., Greenwood, Mo.  
 Stewart, E. L., 521 Shukert Bldg.  
 Streett, St. Clair, 123 W. Twelfth St.  
 Strother, J. S., 311 Commerce Bldg.  
 Swaney, Loren, Hickman Mills, Mo.  
 Swaney, A. C., Lees Summitt, Mo.  
 Switzer, Clyde, Cor. 12th & Troost.  
 Talbott, Ambrose, Rialto Bldg.  
 Taylor, L. G., 720 Woodland Ave.  
 Tesson, N. A. G., 332 Shukert Bldg.  
 Thomas, A. W., Springfield, Mo.  
 Thompson, James, Rialto Bldg.  
 Thompson, J. H., Deardorff Bldg.  
 Thornton, T. R., Lees Summitt, Mo.  
 Thrailkill, E. H., Rialto Bldg.  
 Tiffany, F. B., 805 McGee St.  
 Tieman, T. G., 603 Sw. Boul.  
 Trueman, H. G., 702 Commerce Bldg.  
 Twyman, G. T., Independence, Mo.  
 Van Eman, F. T., 415 Argyle Bldg.  
 Voegelin, S., 436 New Ridge Bldg.  
 Wall, A. H., 3839 Independence.  
 Watson, B. F., Rialto Bldg.  
 Weyer, I. S., 503 Bryant Bldg.  
 Weiss, F. H., 415 Deardorff Bldg.  
 Wheeler, B. H., 422 Deardorff Bldg.  
 Wheeler, W. S., 205 E. 12th St.  
 Wherritt, H. P., Independence, Mo.  
 Willis, W. C., 311 Argyle Bldg.  
 Wilson, C. E., 415 Keith & Perry Bldg.  
 Wilson, Dora G., 1008 Locust St.  
 Wilson, John, 720 Shukert Bldg.  
 Wolf, I. J., 408 Argyle Bldg.  
 Wood, N. P., Independence, Mo.  
 Woolley, Paul V., 309 Argyle, Bldg.  
 Wyatt, T. E., 3215 Olive St.  
 Zwart, B. H., 1019 Prospect St.

JASPER COUNTY.

Anderson, F. L., Joplin, Mo.  
 Barnett, A. F., Joplin, Mo.  
 Balsley, M. T., Joplin, Mo.  
 Baird, E. H., Webb City, Mo.  
 Blackwell, Z. T., Joplin, Mo.  
 Bragdon, G. H., Reeds, Mo.  
 Clark, J. W., Cartersville, Mo.  
 Cook, L. C., Webb City, Mo.  
 Donanue, P., Joplin, Mo.  
 Dumbauld, B. A., Cartersville, Mo.

Freeman, A. B., Joplin, Mo.  
 Grantham, S. A., Joplin, Mo.  
 Hall, Elizabeth, Carthage, Mo.  
 James, R. M., Joplin, Mo.  
 Kelso, R. S., Joplin, Mo.  
 Kincheloe, M. B., Joplin, Mo.  
 Korn, A. L., Carthage, Mo.  
 Lanyon, W. H., Joplin, Mo.  
 Malloy, W. H., Joplin, Mo.  
 Matthews, L. I., Joplin, Mo.  
 Mays, G. I., Joplin, Mo.  
 McClure, G. W., Cartersville, Mo.  
 McMichael, A. O., Joplin, Mo.  
 Miller, G. W., Joplin, Mo.  
 Miller, S. H., Joplin, Mo.  
 Neff, R. L., Joplin, Mo.  
 Pifer, J. D., Joplin, Mo.  
 Powers, Everett, Carthage, Mo.  
 Rohan, F. E., Joplin, Mo.  
 Shelton, M. C., Joplin, Mo.  
 Snyder, A. R., Joplin, Mo.  
 Spriggs, M. L., Joplin, Mo.  
 Steele, W. E., Carthage, Mo.  
 Taylor, H. H., Joplin, Mo.  
 Winchester, J. M., Joplin, Mo.  
 Woolfe, B. F., Carthage, Mo., R.F.D.No.1.

## JEFFERSON COUNTY.

Donnell, J. T., Festus, Mo.  
 Donnell, R. E., De Soto, Mo.  
 Farrar, W. H., De Soto, Mo.  
 Hamel, A. H., De Soto, Mo.  
 Harris, C. G., Festus, Mo.  
 Hauck, S. W., Kimmswick, Mo.  
 Kirk, J. F. W., Kimmswick, Mo.  
 MacNutt, I. N., Pevely, Mo.  
 Rutledge, J. C., Festus, Mo.  
 Tidwell, G. W., De Soto, Mo.

## JOHNSON COUNTY.

Aber, W. H., Montserrat, Mo.  
 Adcock, D. C., Warrensburg, Mo.  
 Adcock, J. A. B., Warrensburg, Mo.  
 Anderson, J. L., Warrensburg, Mo.  
 Anderson, J. T., Warrensburg, Mo., R. F. D.  
 Bozarth, John R., Centerview, Mo.  
 Bradley, T. L., Warrensburg, Mo.  
 Case, Z., Warrensburg, Mo.  
 Gilbert, E. H., Warrensburg, Mo.  
 Graves, E. A., Kingsville, Mo.  
 Hall, O. B., Warrensburg, Mo.  
 Howard, T. S., Chilhowee, Mo.  
 Johnson, W. E., Warrensburg, Mo.  
 Martin, W. L., Chilhowee, Mo.  
 Murray, L. F., Holden, Mo.  
 Ozias, C. O., Warrensburg, Mo.  
 Pare, E. G., Lieton, Mo.  
 Porter, J. E., Knobnoster, Mo.  
 Raines, N. J., Knobnoster, Mo.  
 Rice, J. M., Columbia, Mo.  
 Schofield, L. J., Warrensburg, Mo.  
 Schooley, R. C., Robbins, Mo.  
 Shy, M. E., Knobnoster, Mo.  
 Thompson, J. T., Holden, Mo.  
 Tilton, A. L., Truxton, Arizona.  
 Zoll, F. C., Warrensburg, Mo.

## KNOX COUNTY.

Brown, L. S., Edina, Mo.  
 Haden, J. W., Pleona, Mo.  
 Humphrey, B. F., Hurdland, Mo.  
 Humphrey, H., Locust Hill, Mo.  
 Jurgens, H. J., Edina, Mo.  
 McReynolds, U. R., Knox City, Mo.  
 Morris, W. J., Edina, Mo.  
 Pierce, Don, Newark, Mo.  
 Wilsey, A. R., Hurdland, Mo.

## LACLEDE COUNTY.

Barker, J. C., Russ, Mo.  
 Billings, J. M., Lebanon, Mo.  
 Herbert, T. B., Lebanon, Mo.  
 Jacobs, J. C., Conway, Mo.  
 Lindsey, J. W., Orla, Mo.  
 Lockwood, W. A., Conway, Mo.  
 McComb, Al., Lebanon, Mo.  
 McComb, Jas., Lebanon, Mo.  
 Pinkard, J. A., Lebanon, Mo.  
 Standard, D. E., Lebanon, Mo.

## LAFAYETTE COUNTY.

Barclay, R. D., Odessa, Mo.  
 Braecklein, W. A., Higginsville, Mo.  
 Carter, R. C., Higginsville, Mo.  
 Carthrae, Lewis, Cordee, Mo.  
 Cope, J. Q., Lexington, Mo.  
 Fulkerson, J. J., Lexington, Mo.  
 Gaines, E. F., Bates City, Mo.  
 Harwood, W. G., Dover, Mo.  
 Licser, F. D., Concordia, Mo.  
 Lissack, H. M., Lexington, Mo.  
 McLennan, Higginsville, Mo.  
 Mann, J. A., Wellington, Mo.  
 Mann, F. W., Wellington, Mo.  
 McGinnis, F., Higginsville, Mo.  
 Nickell, C. A., Mayview, Mo.  
 Ott, W. C., Higginsville, Mo.  
 Payne, N. B., Lexington, Mo.  
 Parkhurst, C. L., Odessa, Mo.  
 Perrie, J., Mayview, Mo.  
 Roberts, M. G., Lexington, Mo.  
 Ryland, C. T., Lexington, Mo.  
 Schreiman, F., Concordia, Mo.  
 Schneider, J. A., Concordia, Mo.  
 Tucker, J. E., Lexington, Mo.  
 Watts, R. D., Napoleon, Mo.  
 Webb, W. C., Higginsville, Mo.  
 Williams, H., Odessa, Mo.  
 Williams, G., Odessa, Mo.

## LAWRENCE-STONE COUNTY.

Andrew, J. P., Marionville, Mo.  
 Baird, Jesse P., Marionville, Mo.  
 Clark, H. Ross, Pierce City, Mo.  
 Craven, J. H., Marionville, Mo.  
 Doggett, C. R., Crane, Mo.  
 Freeland, P. D., Pierce City, Mo.  
 Goodrich, E. E., Crane, Mo.  
 Gum, L. J., Stinson, Mo.  
 Harding, D. E., Aurora, Mo.  
 Harris, J. A., Mt. Vernon, Mo.  
 Hoffman, D. M., Crane, Mo.  
 McCall, T. D. S., Marionville, Mo.  
 Madry, A. H., Aurora, Mo.  
 Melton, J. A., Aurora, Mo.  
 Miller, Thos. D., Aurora, Mo.  
 Moore, C. A., Aurora, Mo.  
 Rice, Marion, Stotts City, Mo.  
 Rodman, W. W., Pierce City, Mo.  
 Shumate, L. St. Clair, Reed Springs, Mo.  
 Smart, W. R., Crane, Mo.  
 Stevenson, F. S., Aurora, Mo.  
 Wade, E. E., Crane, Mo.  
 Winter, J. M., Mt. Vernon, Mo.

## LEWIS COUNTY.

Brown, J. C., Lewistown, Mo.  
 Cole, Paul F., Steffenville, Mo.  
 Dunlap, H. E., Canton, Mo.  
 Ellery, William, La Grange, Mo.  
 Ellery, Wm. L., La Grange, Mo.  
 Frame, C. N., Ewing, Mo.  
 Frame, J. P., Ewing, Mo.  
 Ford, John M., Williamstown, Mo.  
 Knight, G. P., Benjamin, Mo.  
 McCutchan, G. L., Canton, Mo.  
 McGlasson, T. F., Lewistown, Mo.  
 McKim, H. W., LaBelle, Mo.  
 Marchland, J. B., Monticello, Mo.  
 Musgrove, J. K., LaBelle, Mo.  
 Owens, N. O., La Grange, Mo.  
 Perry, A. A., Williamstown, Mo.  
 Raines, J. D., Maywood, Mo.  
 Rebo, W. A., Canton, Mo.  
 Schofield, R. B., Lewistown, Mo.  
 Shanks, C. O., Canton, Mo.  
 Simpson, W. B., LaBelle, Mo.  
 Sullivan, G. M., Lewistown, Mo.  
 Thomlin, G. F., Williamstown, Mo.  
 Tompkins, Junius, Canton, Mo.  
 Wilson, R. E., LaBelle, Mo.  
 Wiseman, T. P., Monticello, Mo.

## LINCOLN COUNTY.

Bankhead, C. L., Paynesville, Mo.  
 Bailey, S. M., Elsberry, Mo.  
 Diggs, J., Hawkpoint, Mo.  
 Hemphill, W. A., Elsberry, Mo.

Kieling, F. U., Elsberry, Mo.  
 Knox, J. A., Whiteside, Mo.  
 McKay, S. R., Troy, Mo.  
 Powell, C. E., Elsberry, Mo.  
 Prewitt, G. E., Hawkpoint, Mo.  
 Smith, W. P., Troy, Mo.  
 Stuckert, O., Whiteside, Mo.

## LINN COUNTY.

Buck, U. G., Rothville, Mo.  
 Burke, F. W., Laclede, Mo.  
 Burke, J. L., Laclede, Mo.  
 Carlyl, L. P., Brookfield, Mo.  
 Cochran, F. B., Brookfield, Mo.  
 Dryden, U. G., Purden, Mo.  
 Ellis, W. W., Marceline, Mo.  
 Epperson, H. E., Browning, Mo.  
 Eure, J. B., Brookfield, Mo.  
 Fore, T. P., Brookfield, Mo.  
 Frazer, Leland, Marceline, Mo.  
 Howard, D. F., Brookfield, Mo.  
 Jenkins, C. E., Brookfield, Mo.  
 Johnson, H. C., Meadville, Mo.  
 Lane, J. W., Linneus, Mo.  
 Mairs, J. A., Browning, Mo.  
 Mason, J. W., Brookfield, Mo.  
 Morris, Robt. H., Linneus, Mo.  
 Musgrove, W. H., Eversonville, Mo.  
 Oven, T. P., Brookfield, Mo.  
 Patrick, P. L., Bucklin, Mo.  
 Polson, J. T., Laclede, Mo.  
 Pratt, H. H., Brookfield, Mo.  
 Putnam, B. B., Marceline, Mo.  
 Putnam, Ola, Marceline, Mo.  
 Riding, O. H., Meadville, Mo.  
 Scott, W. B., Bucklin, Mo.  
 Stanley, X. T., Laclede, Mo.  
 Standly, Kathryn V., Brookfield, Mo.  
 Standly, E. D., Linneus, Mo.  
 Stratton, C. D., Rothville, Mo.  
 Thompson, J. M., Meadville, Mo.  
 Trippier, Bert, Browning, Mo.  
 Whaley, R. W., Browning, Mo.

## LIVINGSTON COUNTY.

Alexander, G. W., Chula, Mo.  
 Batdorff, F. P., Farmersville, Mo.  
 Barney, R., Chillicothe, Mo.  
 Chaffin, R. E., Belton, Mo.  
 Girdner, Wm. M., Chillicothe, Mo.  
 Grace, H. M., Chillicothe, Mo.  
 Houf, W., Farmersville, Mo.  
 Ogan, E. F., Chula, Mo.  
 Patton, C. W., Sampil, Mo.  
 Shelton, J. C., Chillicothe, Mo.  
 Simpson, A. J., Chillicothe, Mo.  
 Simpson, W. R., Chillicothe, Mo.  
 Stevens, B. N., Chillicothe, Mo.  
 Tracy, L. E., Chillicothe, Mo.  
 White, W. L., Springhill, Mo.  
 Wooden, I. M., Dawn, Mo.

## MACON COUNTY.

Bradley, W. E., Ethel, Mo.  
 Campbell, J. F., Lapla, Mo.  
 Mason, L. O., Bevier, Mo.  
 Pipkin, W. D., Excello, Mo.  
 Reagan, C. W., Macon, Mo.  
 Rowland, W. P., Bevier, Mo.  
 Smith, E. S., Macon, Mo.  
 Watson, T. S., Bevier, Mo.  
 White, M. S., Roanoke, Mo.

## MADISON COUNTY.

Anthony C. A., Fredericktown, Mo.  
 Barron, W. H., Mine La Motte, Mo.  
 Carr, G. M., Mine La Motte, Mo.  
 Cozzen, E. P., Fredericktown, Mo.  
 Davis, C. U., Fredericktown, Mo.  
 Dines, G. L., Mine La Motte, Mo.  
 Gale, F. W., Marquand, Mo.  
 Greenwood, G. W., Fredericktown, Mo.  
 Haley, O., Fredericktown, Mo.  
 Newberry, F. R., Fredericktown, Mo.  
 Slaughter, S. C., Fredericktown, Mo.  
 Smith, J. K., Fredericktown, Mo.

## MARION COUNTY.

Banks, H. L., Hannibal, Mo.  
 Baskett, J. N., Hannibal, Mo.  
 Bourn, J. J., Hannibal, Mo.  
 Bounds, E. H., Hannibal, Mo.  
 Bush, F. W., Hannibal, Mo., R. F. D.  
 Chilton, J. C., Hannibal, Mo.  
 Chowning, Thos., Hannibal, Mo.  
 Detweiler, A. J., Hannibal, Mo.  
 Farrell, J. J., Hannibal, Mo.  
 Goodier, Robt. H., Hannibal, Mo.  
 Guss, W. C., Hannibal, Mo.  
 Hays, W. H., Hannibal, Mo.  
 Hornback, E. T., Hannibal, Mo.  
 Howell, J. S., Hannibal, Mo.  
 Primm, J. N., Hannibal, Mo.  
 Reid, J., Hannibal, Mo.  
 Schmidt, R., Hannibal, Mo.  
 Shanks, A. L., Hannibal, Mo.  
 Smith, S. G., Hannibal, Mo.  
 Smith, U. S., Hannibal, Mo.  
 Vandiver, C. E., Hannibal, Mo.  
 Waldo, E. E., Hannibal, Mo.

## McDONALD COUNTY.

No Report Received.

## MERCER COUNTY.

Bristow, G. M., Princeton, Mo.  
 Buren, C. R., Princeton, Mo.  
 Ewing, Ed. W., Spickards, Mo.  
 Nally, H., Cainsville, Mo.  
 Oyler, H. W., Mill Grove, Mo.  
 Perry, J. M., Princeton, Mo.  
 Pickett, C. P., Mercer, Mo.  
 Powell, B. S., Mercer, Mo.  
 Stacey, E. W., Princeton, Mo.

## MILLER COUNTY.

Allee, W. L., Eldon, Mo.  
 Bennage, J. L., Olean, Mo.  
 Van Grep, W. A., Iberia, Mo.

## MISSISSIPPI COUNTY.

Chapman, A. W., Charleston, Mo.  
 Finley, I. L., Anniston, Mo.  
 Lynch, J. W., Charleston, Mo.  
 Reid, H. L., Charleston, Mo.  
 Vernon, F. S., Farmington, Mo.  
 Wallace, G. R., Bertrand, Mo.  
 Willis A., Birds Point, Mo.

## MONITEAU COUNTY.

Allee, E. M., California, Mo.  
 Bramel, H. W., McGirk, Mo.  
 Burke, J. P., California, Mo.  
 Crum, J. A., Marion, Mo.  
 Dearing, W. A., Jamestown, Mo.  
 Freudenberger, H., Clarksburg, Mo.  
 Gray, L. M., California, Mo.  
 Houser, F. W., California, Mo.  
 English, J. E., Bacon, Mo.  
 Klueber, H. C., California, Mo.  
 Lang, J. W., Centertown, Mo.  
 Latham, H. W., Latham, Mo.  
 Latham, L. L., Latham, Mo.  
 Marsh, J. W., Tipton, Mo.  
 Norman, J. B., California, Mo.  
 Patterson, W. R., Tipton, Mo.  
 Popejoy, H. R., High Point, Mo.  
 Redmon, S. H., Tipton, Mo.  
 Robertson, J. M., Bunceton, Mo.  
 Stewart, J. B., Clarksburg, Mo.  
 Thorpe, A. V., Jamestown, Mo.  
 Wilson, G. S., Fortuna, Mo.

## MORGAN COUNTY.

No Report Received.

## MONROE COUNTY.

Baker, Chas., Sante Fe, Mo.  
 Bell, W. T., Stoutville, Mo.  
 Brown, S. M., Monroe City, Mo.  
 Brown, J. E., Florida, Mo.  
 Carver, F. S., Madison, Mo.  
 Cassity, G. H., Tulip, Mo.  
 Dixon, C. H., Holliday, Mo.



Duncan, Edward, Long Branch, Mo.  
 Ely, A. W., Monroe City, Mo.  
 Furnish, J. A., Granville, Mo.  
 Hull, J. R., Monroe City, Mo.  
 Johnson, G. A., Holliday, Mo.  
 Lensley, M. E., Madison, Mo.  
 Lloyd, T. B., Paris, Mo.  
 McMurray, M. C., Paris, Mo.  
 McNutt, W. B. A., Monroe City, Mo.  
 Moss, F. M., Paris, Mo.  
 Payne, H. G., Paris, Mo.  
 Shobe, H. C., Paris, Mo.  
 Sweeney, John L., Monroe City, Mo.

## NEW MADRID COUNTY.

No Report Received.

## NEWTON COUNTY.

Benton, A. W., Neosho, Mo.  
 Bowers, H., Neosho, Mo.  
 Bridges, J. M., Tipton Ford, Mo.  
 Brown, W. D., Newtonia, Mo.  
 Campbell, William, Seneca, Mo.  
 Chapman, U. S., Diamond, Mo.  
 Cravens, W. A., Granby, Mo.  
 Doty, E. G., Anderson, Mo.  
 Foster, H. F., Neosho, Mo.  
 Hancock, J. B., Newtonia, Mo.  
 Harrison, G. W., Newtonia, Mo.  
 Hodges, J. J., Granby, Mo.  
 Lamson, J. W., Neosho, Mo.  
 Lamson, R. C., Neosho, Mo.  
 Langley, J. W., Granby, Mo.  
 Maas, A., Neosho, Mo.  
 Porter, H. L., Seneca, Mo.  
 Roseberry, E. M., Neosho, Mo.  
 Vancleave, C. T., Neosho, Mo.  
 Weems, D. L., Neosho, Mo.  
 Wills, R. L., Neosho, Mo.

## NODAWAY COUNTY.

Allen, A. B., Maryville, Mo.  
 Anthony, F. R., Maryville, Mo.  
 Barnett, A. D., Guilford, Mo.  
 Bradbury, R. M., Maryville, Mo.  
 Carter, Marcus, Burlington Junction, Mo.  
 Crowson, E. L., Pickering, Mo.  
 Cummins, K. C., Maryville, Mo.  
 Day, Hiram, Parnell, Mo.  
 Dean, C. G., Burlington Junction, Mo.  
 Dean, L. E., Maryville, Mo.  
 Gaugh, M. A., Burlington Junction, Mo.  
 Goodson, H. C., Hopkins, Mo.  
 Heryford, W. B., Pickering, Mo.  
 Howell, C. F., Bedison, Mo.  
 Hunterson, D. J., Parnell, Mo.  
 Johns, Comer, Wilcox, Mo.  
 Kirk, C. W., Hopkins, Mo.  
 Koch, C. D., Maryville, Mo.  
 Large, S. D., Hopkins, Mo.  
 Larrabee, J. A., Barnard, Mo.  
 Malzahm, E. T., Ravenwood, Mo.  
 Martin, F. M., Maryville, Mo.  
 Lee, F. A., Skidmore, Mo.  
 McClanahan, G. N., Guilford, Mo.  
 Nash, G. A., Maryville, Mo.  
 Pierpoint, J. E., Skidmore, Mo.  
 Pollard, D. A., Barnard, Mo.  
 Pollard, M. M., Barnard, Mo.  
 Ryan, F. M., Quitman, Mo.  
 Sargent, D. A., Hopkins, Mo.  
 Saylor, H. L., Elmo, Mo.  
 Smith, D. G., Arkoe, Mo.  
 Stuckle, W. P., Clyde, Mo.  
 Todd, J. H., Maryville, Mo.  
 Wallis, W. M., Maryville, Mo.  
 Wallis, F. C., Maryville, Mo.

## PEMISCOT COUNTY.

No Report Received.

## PERRY COUNTY.

No Report Received.

## PETTIS COUNTY.

(All addresses are Sedalia, Mo., unless otherwise stated.)

Bishop, W. T., Hughesville, Mo.  
 Bohling, C., Fifth and Ohio.  
 Campbell, A. J., 301 Ohio.  
 Cole, H. B., 501 S. Engineer.  
 Collins, M. T., 219 Ilgenfritz Bldg.  
 Cowan, W. G., 504 S. Ohio.  
 Dunlap, W. O., 108 West Main St.  
 Dyer, David P., Dresden, Mo.  
 Ferguson, W. J., 321 Ohio.  
 Hubbard, J. D., Versailles, Mo.  
 Kelly, Sam., Ilgenfritz Bldg.  
 Knott, Minerva, E. 7th St.  
 Love, J. G., State Hosp., Nevada, Mo.  
 McNeil, C. A., M. K. & T. Hospital.  
 McNeil, G. E., M. K. & T. Hospital.  
 Morley, F. R., 1103 E. 5th St.  
 Overstreet, W. C., 312 S. Ohio.  
 Sands, M. L., Cole Camp, Mo.  
 Simonds, Wallace, 418 S. Ohio.  
 Sutton, F. L., Hoffman Bldg.  
 Shirk, W. S., Hoffman Bldg.  
 Tittsworth, G., 508 S. Ohio St.  
 Tucker, A. J., 401 S. Ohio.  
 Wood, E. A., Hoffman Bldg.  
 Yancey, E. F., M. K. & T. Hospital.

## PHELPS COUNTY.

Baysinger, S. L., Rolla, Mo.  
 Breuer, W. H., St. James, Mo.  
 Burns, W. F., Newburg, Mo.  
 Cowan, R. B., Edgar Springs, Mo.  
 Fulbright, C. H., St. James, Mo.  
 Johnson, R. L., Rolla, Mo.  
 Matlock, L. J., St. James, Mo.  
 Rowe, S. B., Rolla, Mo.  
 Short, N. J., Rolla, Mo.  
 Smith, B. T., Newburg, Mo.  
 Smith, W. S., Rolla, Mo.

## PIKE COUNTY.

Bankhead, C. L., Paynesville, Mo.  
 Bankhead, J. E., Clarksville, Mo.  
 Barnett, D. E., New Hartford, Mo.  
 Bartlett, E. M., Clarksville, Mo.  
 Bartlett, J. M., Clarksville, Mo.  
 Biggs, M. O., Bowling Green, Mo.  
 Byrns, R. W., Frankford, Mo.  
 Davis, J. D., Louisiana, Mo.  
 Dreyfus, I. W., Louisiana, Mo.  
 Hardin, Rufus, Louisiana, Mo.  
 Hereford, R. G., Louisiana, Mo.  
 Hetherlin, T. G., Louisiana, Mo.  
 Kennedy, J. J., Louisiana, Mo.  
 Pearson, D. M., Louisiana, Mo.  
 Pollard, W. H., Eolia, Mo.  
 Smith, C. A., Annada, Mo.  
 Treadway, W. W., Turpin, Mo.  
 Unsell, J. B., Eolia, Mo.  
 Walters, W. T., Bowling Green, Mo.

## PLATTE COUNTY.

Benham, C. E., Parkville, Mo.  
 Chastain, C. H., Weston, Mo.  
 Clark, H. M., Platte City, Mo.  
 Coffey, G. C., Platte City, Mo.  
 Cowan, Lee, Latan, Mo.  
 Dinwiddie, F. G., Camden Point, Mo.  
 Gardner, P. L., Waldron, Mo.  
 Hale, J. M., Dearborn, Mo.  
 Herndon, A. S., Camden Point, Mo.  
 Mizener, J. L., Edgerton, Mo.  
 Moore, M. H., Dearborn, Mo.  
 Naylor, Alva., Platte City, Mo.  
 Patterson, H. H., Edgerton, Mo.  
 Redman, Spencer, Platte City, Mo.  
 Shafer, F. M., Edgerton, Mo.  
 Shultz, J. W., Weston, Mo.  
 Smith, A. S. J., Dearborn, Mo.  
 Swaney, W. D., Linkville, Mo.  
 Underwood, J., Parkville, Mo.  
 Wilson, R. P. C., Platte City, Mo.  
 Winter, J. H., Parkville, Mo.  
 Yocum, G. D., Parkville, Mo.

POLK COUNTY.

Brown, Chas. H., Fair Play, Mo.  
Cousins, S. W., Morris, Mo.  
Hopkins, W. S., Bolivar, Mo.  
Loafman, J. E., Bolivar, Mo.  
Mitchell, A. P., Bolivar, Mo.  
Myers, W. T., Aldrich, Mo.

PULASKI COUNTY.

No Report Received.

PUTMAN COUNTY.

Carrier, C. H., Hartford, Mo.  
Cozad, F. A., Powerville, Mo.  
Geisinger, E. J., Unionville, Mo.  
Gray, L. L., St. John, Mo.  
Haynes, Lee, Mendota, Mo.  
Holman, J. H., Unionville, Mo.  
McCutchen, J. E., Lemonsville, Mo.  
Montgomery, E. A., Unionville, Mo.  
Noel, I. F., Unionville, Mo.  
Rice, F. D., Lucerne, Mo.  
St. John, R. L., Howland, Mo.  
Thomas, C. O., Worthington, Mo.  
Townsend, J. A., Unionville, Mo.

RAILS COUNTY.

Birney, W. L., Oakwood, Mo.  
Downing, T. J., New London, Mo.  
Graves, C. H., Center, Mo.  
Hendrix, W. G., New London, Mo.  
Harwood, W. S., Rensselaar, Mo.  
Monroe, Thomas, Center, Mo.  
McCullon, R. W., Center, Mo.  
Ragen, Sam., New London, Mo.  
Walter, Fred., Perry, Mo.  
Waters, W. T., New London, Mo.  
Wix, F. M., Center, Mo.  
Winn, M., Iasco, Mo.

RANDOLPH COUNTY.

Ash, O. O., Moberly, Mo.  
Bamhart, D. A., Huntsville, Mo.  
Dutton, C. K., Moberly, Mo.  
Howery, J. A., Clifton Hill, Mo.  
Mitchell, R. A., Clark, Mo.  
Selby, W. M., Moberly, Mo.  
Terrill, W. R., Clifton Hill, Mo.  
Taylor, J. W., Huntsville, Mo.  
Toules, S. P., Jacksonville, Mo.

RAY COUNTY.

Cook, T. B., Rayville, Mo.  
Es:ill, W. G., Lawson, Mo.  
Greene, L. D., Richmond, Mo.  
Hamilton, R. L., Richmond, Mo.  
Magor, H., Hardin, Mo.  
Mussen, E. H., Norborne, Mo.  
Rentfro, E. W., Rayville, Mo.  
Shotwell, C. B., Richmond, Mo.  
Smith, James W., Richmond, Mo.  
Sheets, R., Orrick, Mo.  
Todd, W. G., Lawson, Mo.

REYNOLDS COUNTY.

No Report Received.

RIPLEY COUNTY.

No Report Received.

ST. CHARLES COUNTY.

Edwards, J. C., O'Fallon, Mo.  
Hardin, Thomas Lee, Defiance, Mo.  
Jackson, T. J., St. Charles, Mo.  
Kraft, A. J., Augusta, Mo.  
Richoff, H. J., Augusta, Mo.  
Wiegiers, T. L., Flint Hill, Mo.

ST. CLAIR COUNTY.

Bell, W. E., Osceola, Mo.  
Cline, W., Appleton City, Mo.  
Moorehouse, Emma, Appleton City, Mo.  
Seevers, Ruth, Osceola, Mo.  
Smith, E. J., Appleton City, Mo.  
Stratton, L. S., Roscoe, Mo.  
Williams, D. B., Osceola, Mo.

ST. FRANCOIS COUNTY.

Appleberg, R., Leadwood, Mo.  
English, J. H., Farmington, Mo.  
Evans, A. L., Bonne Terre, Mo.  
Fleming, C. R., Farmington, Mo.  
Haw, J. L., Farmington, Mo.  
Lister, R. B., Desloge, Mo.  
McCormick, E. C., Farmington, Mo.  
McEwen, G. A., Farmington, Mo.  
McKenzie, D. H., Leadwood, Mo.  
Reece, W. C., Elvins, Mo.  
Williams, G. B., Flat River, Mo.

STE. GENEVIEVE COUNTY.

Hertich, C. J., Ste. Genevieve, Mo.  
Hinch, F. E., Ste. Genevieve, Mo.  
Jarvis, N. W., Bloomdale, Mo.  
Lanning, R. W., Ste. Genevieve, Mo.  
Meyer, A. G., Ste. Genevieve, Mo.  
Moore, C., St. Marys, Mo.  
Morganstein, H. J., Weingarten, Mo.  
Rutledge, G. M., Ste. Genevieve, Mo.  
Shirley, J. M., St. Marys, Mo.  
Wilkins, J. A., St. Marys, Mo.

ST. LOUIS COUNTY.

Armstrong, C. L., Webster Groves, Mo.  
Bracy, Rolla, Wellston, Mo.  
Brossard, P. M., Maplewood, Mo.  
Cape, L. W., Maplewood, Mo.  
Carter, H., Webster Groves, Mo.  
Coleman, H. F., Pattonville, Mo.  
Dalton, M., Fenton, Mo.  
Denny, R. B., Eureka, Mo.  
Douglass, J. T., Ferguson, Mo.  
Dunnavant, C. A., Kirkwood, Mo.  
Forsyth, R. C., Kirkwood, Mo.  
Gallagher, J. C., Valley Park, Mo.  
Greensfelder, H., Kirkwood, Mo.  
Guibor, F. E., Maplewood, Mo.  
Higgins, R. M., Kirksville, Mo.  
Jenson, N. N., Florissant, Mo.  
Koch, O. W., Ballwin, Mo.  
Loving, S. R., Central, Mo., R. F. D. No. 2.  
Lucas, H. T., Bridgeton, Mo.  
Maisch, Aug., Manchester, Mo.  
Metcalf, N. E., Maplewood, Mo.  
Miles, H., Webster Groves, Mo.  
Moore, R. D., Central, Mo.  
O'Brien, L. F., Sappington, Mo.  
Pfister, J. D., Creve Coeur, Mo.  
Pitman, John, Kirkwood, Mo.  
Randall, H. T., Clayton, Mo.  
Reynolds, S. H., Maplewood, Mo.  
Thurman, E. J., Fenton, Mo.  
Townsend, W. H., Maplewood, Mo.  
Will, S. J., Jefferson Barracks, Mo.  
Wyer, H. G., Kirkwood, Mo.  
Zuppam, Chas., Baldwin, Mo.

ST. LOUIS MEDICAL SOCIETY.

(All addresses St. Louis, Mo.)

Abeken, F. W., 3531 S. Broadway.  
Albrecht, F. H., 3763 Westminster Pl.  
Allison, Nathaniel, Linmar Bldg.  
Alt, A., 3036 Locust St.  
Althaus, Carl, 2024 S. Jefferson.  
Ambrose, A. O., 313 N. Ninth St.  
Amos, N. W., 3001 Olive St.  
Amyx, R. F., 1943 N. Eleventh St.  
Amerland, J. H., 2739 Chippewa St.  
Apperson, E. L., Linmar Bldg.  
Appleberry, D., Tamm and Clayton Road.  
Atkinson, R. C., 3002 Lafayette Ave.  
Atkins, H. S., Insane Asylum.  
Aufderheide, W. D., 2754 Arsenal St.  
Auler, H. A., 2708 Lynch St.  
Ayars, T. R., 3901 Easton Ave.  
Bahler, E. A., 617 Euclid Ave.  
Bailey, F. W., 1611 California Ave.  
Baker, R. W., 4233 Olive St.  
Ball, J. M., 3509 Franklin Ave.  
Ball, O. F., Linmar Bldg.  
Barck, C., Humboldt Bldg.  
Barclay, R., 3894 Washington Ave.  
Barnes, A. S., 5434 Maple Ave.

- Barnes, A. S., Jr., Mo. Trust Bldg.  
 Barnes, P. C., 2931 Easton Ave.  
 Barnes, P. L., 5434 Maple Ave.  
 Barnes, R. H., 412 Sarah St.  
 Baron, Jules, 4900 Berlin Ave.  
 Barrington, R. L., 5658 Cates Ave.  
 Bartenheier, F. G., City Hospital.  
 Bartlett, Willard, 4257 Washington Ave.  
 Bartscher, H. W., 829 Bremen Ave.  
 Bauer, C. E., 2104 N. Fourteenth St.  
 Baumgarten, G., Humboldt Bldg.  
 Baumgarten, Walter, Humboldt Bldg.  
 Baumgartner, C., 2108 Russell Ave.  
 Becker, W. H., 4743 Labadie Ave.  
 Beckham, G. S., 5110 Page Blvd.  
 Bedal, A. C., 3418 Lucas Ave.  
 Behrens, L. H., 5 S. Broadway.  
 Benson, B. G., 2136 Benton St.  
 Bennett, Floyd W., 2828 St. Vincent Ave.  
 Birdman, F. H., City Hospital.  
 Bishop, F. L., 516 N. Garrison Ave.  
 Black, W. D., 1411 California Ave.  
 Blair, V. P., Linmar Bldg.  
 Blatner, F. O., 233 S. Jefferson.  
 Bliss, M. A., Humboldt Bldg.  
 Bock, A. F., 1107 N. Grand Ave.  
 Boehm, Jos. L., 3806 Delmar Ave.  
 Boemler, Geo., 1922 St. Louis, Ave.  
 Boggs, J. D., 813 N. 18th St.  
 Bond, Y. H., 315 N. Grand Ave.  
 Booth, D. S., Linmar Bldg.  
 Botts, McDowell, Frisco Hospital.  
 Bradley, A. H., 1019 N. Twenty-first St.  
 Bradley, J. M., 2329 Montgomery Pl.  
 Bradley, J. M.  
 Brandenburger, L. A., 2900 Eads Ave.  
 Brady, J. M., 1467 Union Blvd.  
 Bribach, Benno, 7608 Michigan Ave.  
 Broderick, J. K., Hotel Beers.  
 Brooks, H. S., 3557 Lafayette Ave.  
 Broome, G. W., 619 N. Kingshighway.  
 Brown, A. C. F., 3200 Olive.  
 Brown, J. Y., City Hospital.  
 Brown, O. H., Grand & Caroline Sts.  
 Bryan, R. S., Humboldt Bldg.  
 Bryan, W. M. C., 3858 Westminster Pl.  
 Buchanan, J. M., 721 N. Kingshighway.  
 Buckwalter, J. C., Century Bldg.  
 Buhman, R., 5264 Page Ave.  
 Burford, J. C., 932 Hamilton Ave.  
 Burnett, E. C., Century Bldg.  
 Burnett, D. C., 2602 N. Taylor Ave.  
 Burns, R., 4500 Olive St.  
 Butler, L. P., Maryland & Euclid.  
 Byrd, E., 1000 Bitner St.  
 Cadwallader, I. H., 919 N. Taylor Ave.  
 Cale, G. W., 12 Lenox Pl.  
 Calnane, J. A., 1407 N. Grand.  
 Campbell, A. V., 4631 Westminster Pl.  
 Campbell, G., 3429 Morgan Ave.  
 Cape, L. W., Sutton & Hazel.  
 Caplan, L., Lister Bldg.  
 Carley, H. D., 3419 Bell Ave.  
 Carman, R. D., 4419 Olive St.  
 Carson, G. W., 301 Century Bldg.  
 Chaddock, C. G., 3750 Lindell Bl.  
 Charles, Jos. W., Humboldt Bldg.  
 Clarke, B. W., Vanol Bldg.  
 Clark, S. E., 2835 Morgan.  
 Clemens, James R., 3720 Pine.  
 Clopton, M. B., Humboldt Bldg.  
 Colassowitz, A., Olivia Bldg.  
 Connolly, P. D., 2556 N. Grand Ave.  
 Constantine, M. F. K., 2429 Warne Ave.  
 Cook, G. E., 1739 N. 9th St.  
 Crandall, G. C., 4287 Olive St.  
 Creveling, H. C., Humboldt Bldg.  
 Crossen, H. S., 4477 Delmar Ave.  
 Cummings, H. J., 1200 N. Grand Ave.  
 Dalton, H. C., 3536 Easton Ave.  
 Dames, A. F., Easton & Goodfellow.  
 Davis, L. H., 1017 Park Ave.  
 Davis, Robert H., Lister Bldg.  
 Davis, W., Academy & Page.  
 Dean, J. M., 319 N. Grand Ave.  
 Dickerson, W. L., 5424 Easton Ave.  
 Dixon, C. H., Lister Bldg.  
 Dorsett, E. Lee, City Hospital.  
 Dorsett, Walter B., Linmar Bldg.  
 Dorsey, B. L., 1422 N. Taylor Ave.  
 Doyle, W. J., City Hospital.  
 Drake, Geo. S., Jr., Humboldt Bldg.  
 Drescher, F. B., 3926 S. Broadway.  
 Duncan, J. H., Humboldt Bldg.  
 Ehrenfest, H., Vanol Bldg.  
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 Elbrecht, O. H., Female Hospital.  
 Elmer, W. P., 612 N. Taylor Ave.  
 Engelbach, Wm., Humboldt Bldg.  
 Engman, M. F., Humboldt Bldg.  
 Eberlein, E. W., 1208 Dillon St.  
 Epstein, M. J., 1905 N. Eleventh St.  
 Erhardt, R. T., 313 N. 9th St.  
 Ewing, A. E., 5956 Cabanne Ave.  
 Eyerman, E. H., 1800 S. Broadway.  
 Fahlen, Fred, Humboldt Bldg.  
 Falk, J. C., 2701 Stoddard St.  
 Fienup, T. F., 3218 Lafayette Ave.  
 Fisher, J. A., 5924½ Easton Ave.  
 Fisch, C., 3212 Pine St.  
 Fischel, W. E., Humboldt Bldg.  
 Fischer, W. E., Linmar Bldg.  
 Fleming, A. W., 4130 Manchester Road.  
 Forster, O. E., Carleton Bldg.  
 Fowler, C. E., 8036 N. Broadway.  
 Fowler, S. R., Carleton Bldg.  
 Frankenthal, M., 4163 McPherson Ave.  
 French, Pinckney, Mo. Lincoln Trust Co.  
 Freudenstein, W. H., 2826 Clark Ave.  
 Freund, Newton M., 1440 S. 18th St.  
 Friedman, J., 308 N. Sixth St.  
 Frielingsdorf, E. H., 2202 S. Broadway.  
 Fries, W. A., 1544 S. Broadway.  
 Fry, F. R., Humboldt Bldg.  
 Fuchs, W. H., Lafayette & Compton Ave.  
 Fuhrmann, R. H., 3221 California Ave.  
 Fulton, A. L., 2656 Russell Ave.  
 Funkhouser, R. M., 4354 Olive St.  
 Furney, E. E., 3417 Morgan St.  
 Gamble, D. C., 37 Portland Pl.  
 Garstang, D. B., Linmar Bldg.  
 Gaun, G. A., 1518 N. Grand Ave.  
 Geitz, H. A., Humboldt Bldg.  
 Gellhorn, Geo., Linmar Bldg.  
 Getys, S. L., Linmar Bldg.  
 Glasgow, F. A., 3894 Washington Ave.  
 Glennon, W. P., 319 N. Grand Ave.  
 Goawl, H. P., 3353 Nebraska Ave.  
 Godfrey, Geo. B., 3933 Nebraska Ave.  
 Goldstein, M. A., 3858 Westminster Pl.  
 Goodloe, H., Vanol Bldg.  
 Goodman, D. C., Lister Bldg.  
 Goodwin, E. J., Linmar Bldg.  
 Gordon, F. N., 1542 Mississippi Ave.  
 Gorin, Geo. M., 4225 W. Belle.  
 Gradwohl, R. B. H., 5269 Vernon Ave.  
 Graham, I. E., 1417 Newstead Ave.  
 Grant, J. M., 4132 Easton Ave.  
 Graul, R. E., 2905 Cherokee St.  
 Graves, Spencer C., Lister Bldg.  
 Graves, Wm. W., Vanol Bldg.  
 Gray, Isabell, 3016A S. Grand Ave.  
 Green, John Jr., Vanol Bldg.  
 Greer, E. O., 2750 Park Ave.  
 Greiner, Theo., 5534 Easton Ave.  
 Gregg, A. M.  
 Griffin, F. H., 4504 Easton Ave.  
 Grindon, Joseph, 3894 Washington Ave.  
 Gross, J. H., 306 Oriel Bldg.  
 Grosse, L. W., City Hospital.  
 Grote, W. F. H., 2705 N. Fourteenth St.  
 Guggenheim, Louis, City Hospital.  
 Guhman, J. O., 4531 Washington Ave.  
 Guhman, M. J., 3505 N. Twenty-sixth St.  
 Gundlach, A., 2202 University St.  
 Haase, M. E., 1105 S. Seventh St.  
 Habermaas, A., 3817 Cleveland Ave.  
 Hall, W. A., 1556 Tower Grove.  
 Hall, Willis, Humboldt Bldg.  
 Hallam, J. C., Mermod & Jaccard Bldg.  
 Hardaway, W. A., Lister Bldg.  
 Hardy, Joseph A., 7620 S. Broadway.  
 Harmann, M., 3441 N. Ninth St.  
 Harnisch, H. D., 2407 S. Eighteenth St.  
 Hardy, W. F., 2302 S. Jefferson.  
 Harris, D. L., 5001 Morgan St.  
 Harrol, W. E., 6201 Etzel Ave.  
 Hartmann, Jacob A., 1220 Hickory St.



- Hauck, E. F., 1638 S. Twenty-sixth St.  
 Hauck, L., 903 Morrison Ave.  
 Hawley, N. J., Century Bldg.  
 Helwig, H. J., 2804 Manchester.  
 Hempelmann, L. H., 1107 N. Grand Ave.  
 Henderson, F. L., Humboldt Bldg.  
 Henke, A. F., 2210 Howard St.  
 Hennerich, J. P., 2921 S. Broadway.  
 Henske, A. A., 1504 St. Louis Ave.  
 Herchenroeder, L. C., 2904 Park Ave.  
 Hermann, H. W., 1127 N. Grand Ave.  
 Heuer, Phil H., Humboldt Bldg.  
 Heyer, C., 910 N. Tenth St.  
 Hill, Roland, 4605 Delmar Ave.  
 Hirschi, W. T., 2217 N. Grand Ave.  
 Hoeffler, J. P., 2304 S. Compton Ave.  
 Hoffman, P., 3337 Washington Ave.  
 Hoge, M. W., Linmar Bldg.  
 Hogeboom, R. W., Frisco Bldg.  
 Holt, Chas. S., 627 Century Bldg.  
 Holman, R. S., 3951 Delmar Ave.  
 Holtgrewe, F. W., 1601 Blair Ave.  
 Holt, E. E., 1532 Franklin Ave.  
 Homan, G., Odd Fellows' Bldg.  
 Hopkins, T. A., Century Bldg.  
 Houwink, J. J., 902 Bayard Ave.  
 Howard, O. L., 4213 Nat. Bridge Road.  
 Huber, Julius B., 2752 Chippewa St.  
 Hughes, C. H., 3872 Washington Ave.  
 Hughes, H. S., 2937 St. Vincent Ave.  
 Hughes, Mark Ray, 3872 Washington Ave.  
 Hypes, B. M., 2005 Victor St.  
 Jacobson, H., Mo. Trust Bldg.  
 James, J. A. J., Carleton Bldg.  
 Jennings, J. E., Carleton Bldg.  
 Johnson, E. H., 2507 N. Spring Ave.  
 Johnson, F. P., 3744 Finney Ave.  
 Johnson, H. McC., Linmar Bldg.  
 Jonas, E., 4474 Westminster Pl.  
 Jones, M. D., 4068 Washington Ave.  
 Jude, J. J., 2521 S. Broadway.  
 Jungk, C. G. W., 536 N. Taylor.  
 Kane, R. E., 1123 N. Grand Ave.  
 Keber, J. B., 448 Century Bldg.  
 Keeble, R. R., 2747 Lafayette Ave.  
 Keehn, G. A., 2702 N. Grand Ave.  
 Kennedy, W. U., 1121 Cass Ave.  
 Kern, B. C.  
 Kern, J. H., 1317 Madison St.  
 Kessler, E. H., 3446 Shenandoah Ave.  
 Kieffer, A. R., 4268 W. Belle Pl.  
 Kier, W. F., 3609 Lindell Bl.  
 Kimball, A. C., Grand & Franklin Ave.  
 Kimbrough, John S., Humboldt Bldg.  
 Kirchner, W. C. G., 1211 N. Grand Ave.  
 Klokke, Wm. E., 1316 Mississippi Ave.  
 Klie, G. H. C., 5100 N. Broadway.  
 Klienfelter, M. L., 536 N. Taylor.  
 Klenk, C. L., 2105 S. Broadway.  
 Koch, J. V., City Hospital.  
 Koenig, G. W., 740 S. Fourth St.  
 Koetter, A. P., A. F., 1023 N. Grand.  
 Koontz, C. J., 4551 Delmar.  
 Krebs, G. A., 2709 S. 11th St.  
 Krebs, F. J. V., 1906 St. Louis Ave.  
 Krenning, W. G., 4041A St. Louis Ave.  
 Kroeger, G. B., 3622 Garfield.  
 Krug, F. H., 2506 N. 15th St.  
 Kuhlman, F. C. E., 2135 St. Louis Ave.  
 Kuhn, D., 1746 Chouteau Ave.  
 Kurtzborn E.  
 Laidley, L. H., 308 N. Sixth St.  
 Langan, W. J., Plymouth & Goodfellow.  
 Larew, J. L., Olivia Bldg.  
 Lawrence, W. S., 1913 N. Grand Ave.  
 Lemen, J. R., Vanol Bldg.  
 Leighton, W., 926 Academy Ave.  
 Lewis, Bransford, 627 Century Bldg.  
 Levy, A., Lister Bldg.  
 Lightner, C. R., 2313 Washington Ave.  
 Lincoln, H. F., City Hospital.  
 Link, J. J., Mermod & Iaccard Bldg.  
 Lippe, M. J., 4321 W. Belle Pl.  
 Lipsitz, S., City Hospital.  
 Loeb, C., Humboldt Bldg.  
 Loeb, H. W., Humboldt Bldg.  
 Lowenstein, H. M., 2615 N. Taylor.  
 Long, J. M., 513 Sarah St.  
 Luedde, W. H., Twenty-seventh & Washington  
 Luedeking, R., 1837 Lafayette Ave.  
 Luton, L. S., Olivia Bldg.  
 Lutz, F. J., 1630 S. Grand Ave.  
 Lyon, G. E., Planters Hotel.  
 Lyon, H. N., Humboldt Bldg.  
 Marchildon, John W., 2254 S. Vandeventer.  
 Mardorf, W. C., 1111 Chouteau Ave.  
 Marks, H., 2930 Morgan St.  
 Marquardt, Arthur V., 521 Century Bldg.  
 Marin, C. P., 4111 N. Grand Ave.  
 Martin, T. A., Century Bldg.  
 Marx, Ella, 4269 Delmar Ave.  
 Mayes, J. F., 1803 Olive St.  
 McAnnis, L. C.  
 McCandless, Wm. A., 5026 Washington Ave.  
 McClure, J., 1704A Market St.  
 McConnell, Guthrie, 4421 Berlin Ave.  
 Meinhard, Joseph, 921 Chouteau Ave.  
 Meisenbach, A. E., 2624 S. Jefferson.  
 Menestrina, J. F., 3409 Washington Ave.  
 Menkhous, J. B., 4607 Easton Ave.  
 Meng, E. R., 728 N. Taylor Ave.  
 Meyer, H. H., 1823 N. Taylor Ave.  
 Millar, R. C. M., 4344 Easton Ave.  
 Miller, H. E., 2257 Missouri Ave.  
 Miller, R. S., 527 Frisco Bldg.  
 Miller, W. J., 3014 Park Ave.  
 Millican, Kenneth W., 3837 W. Pine Blvd.  
 Mook, W. H., Humboldt Bldg.  
 Moore, B. W., 3634 Washington Ave.  
 Moore, J. W., 906 Pine St.  
 Moore, H. M., Linmar Bldg.  
 Moore, W. G., 86 Vandeventer Pl.  
 Morfit, J. C., Humboldt Bldg.  
 Morrell, M. P., 3693 Olive St.  
 Morris, C. C., 2945 Franklin.  
 Mueller, C. E., 1419 S. 7th St.  
 Mueller, G. L., 1310 Clinton St.  
 Mudd, H. G., Humboldt Bldg.  
 Mueller, E., 3334 California Ave.  
 Muetze, Henry, 3201 Shenandoah Ave.  
 Munsch, A. P., 1504 Wagoner Pl.  
 Munson, C. L., 622 Hickory.  
 Murphy, J. C., 4263 Washington Ave.  
 Murphy, R. B., 6035 Manchester Ave.  
 Myer, J. S., 3894 Washington Ave.  
 Myerdick, Albert H., 536 N. Taylor Ave.  
 Nash, W. H., Commercial Bldg.  
 Neuhoft, F., 1318 Chouteau Ave.  
 Neville, E. J., Linmar Bldg.  
 Newman, L. E., Humboldt Bldg.  
 Newman, S. E., 465 N. Taylor Ave.  
 Nicholson, C. M., Lister Bldg.  
 Nietert, H. L., Century Bldg.  
 Norris, E. J., 4223 Russell Ave.  
 Ogle, O. L., 2625 St. Louis Ave.  
 O'Keere, J. J., 4587 W. Belle Terrace.  
 O'Reilly, R. J., 602 N. 7th St.  
 Orr, C. J., Linmar Bldg.  
 Outten, W. B., Mo. Pac. Hospital.  
 Owen, W. C., 3846 Folsom Ave.  
 Padberg, L. R., 3550 Arsenal St.  
 Park, George M., 7544 Cates Ave.  
 Parker, C. W., 3502 N. Jefferson Ave.  
 Parker, Frederick, 1423 Euclid.  
 Parse, A., Frisco Hospital.  
 Patton, F. W., 5617 Maple Ave.  
 Pfeifferberger, J. M., Alton, Ill.  
 Pfeiffer, Hy. G., 1100 Geyer Ave.  
 Pfingsen, C. F., 2230 College Ave.  
 Pitzman, M., City Hospital.  
 Poignee, F. P., 914 Hickory St.  
 Pollman, L. P., 2002 St. Louis Ave.  
 Pope, Chas. H., 1557 S. Jefferson Ave.  
 Pope, Sherman, 1557 S. Jefferson Ave.  
 Porter, Peter, 3863 Flad Ave.  
 Porter, Wm., 520 Olive St.  
 Porterfield, E. P., 4635 Easton Ave.  
 Post, H. M., Twenty-seventh & Washington Ave.  
 Potts, J. D., Lister Bldg.  
 Powell, C. H., Century Bldg.  
 Raitheh, G. H., 1146 Hogan St.  
 Rasseieur, L., 1807 S. Broadway.  
 Ravold, A., 312 Century Bldg.  
 Reder, F., 4629 Cook Ave.  
 Reed, E. E., 4457 Washington Ave.

Reinders, Otto, 2500 S. Twelfth St.  
 Rehfeldt, C. S., 2255 S. Jefferson Ave.  
 Remme, C. F., 400 S. Fourteenth St.  
 Rice, D. F., 5145 Cabanne Ave.  
 Riesmeyer, L. T., 2838 Lafayette Ave.  
 Ring, Frank, Chemical Bldg.  
 Robinson, A. C., 5083 Westminster Pl.  
 Robertson, W. M., Humboldt Bldg.  
 Rodcliffe, E., City Hospital.  
 Rohlfing, A. H., City Dispensary.  
 Rohlfing, C. G., 1200 N. Eighth St.  
 Rohlfing, H. A. L., 2602 Laclede Ave.  
 Rohlfing, L. C., 3126 N. Grand Ave.  
 Rose, J. B., 1908 Grand Ave.  
 Rosebrough, F. H., Grand & Bell Ave.  
 Rothstein, H. B., 3309 S. Thirtieth St.  
 Rotter, C. F., 1910 Arsenal St.  
 Ruddell, 1231 N. Taylor Ave.  
 Rumbold, F. M., 450 Century Bldg.  
 Rusk, Elizabeth E., 4241 Delmar Ave.  
 Salter, J. C., 3634 Washington Ave.  
 Sante, A. H., 3141 Laclede Ave.  
 Sauer, W. E., Humboldt Bldg.  
 Saunders, E. W., 3003 Lafayette Ave.  
 Schery, C. W., 917 Allen Ave.  
 Schleiffarth, C. W., 3619A Connecticut.  
 Schleuter, R. E., 740 S. Fourth St.  
 Schlosstein, A. G., 3153 Goodfellow Ave.  
 Schmalhorst, D. E., 8111 N. Broadway.  
 Schisler, E., 2027 S. Jefferson.  
 Schmeiz, E., 3869 Cottage Ave.  
 Schmidt, W. C., 2417 S. Broadway.  
 Scholz, P., 3403 N. Fourteenth St.  
 Scholz, Paul C., 3201 Franklin Ave.  
 Scholz, R. P., 1110 Ferry St.  
 Schuchat, W. L., 2200 Chouteau Ave.  
 Schulenburg, A. C., Mullanphy Hospital.  
 Seelig, M. G., Vanol Bldg.  
 Semple, N. M., Humboldt Bldg.  
 Shapleigh, J. B., Humboldt Bldg.  
 Shattinger, C., 2924 S. Grand Ave.  
 Shoemaker, J. F., Carleton Bldg.  
 Shultz, H. W., 2603 Cherokee.  
 Shutt, C. H., City Hospital.  
 Senseney, Eugene M., 2829 Washington Ave.  
 Shankland, J. W., City Hospital.  
 Sharpe, N. W., 3520 Lucas Ave.  
 Sheahan, E. L., City Hospital.  
 Shields, W. B., Linmar Bldg.  
 Simon, F. C., 1835 Cass Ave.  
 Singer, Jacob J., Female Hospital.  
 Siuder, G., 2647 Washington Ave.  
 Smith, J. C., Humboldt Bldg.  
 Smith, L., Humboldt Bldg.  
 Spencer, H. N., 2723 Washington Ave.  
 Spencer, Selden, 2723 Washington Ave.  
 Spiegelhalter, J., 2166 Lafayette Ave.  
 Spitzig, F., 937 Park Ave.  
 Stauffer, W. H., Humboldt Bldg.  
 Steiner, A., 224 Commercial Bldg.  
 Stewart, J., 4847 Page Ave.  
 Stockwell, B. E., 2345 S. Broadway.  
 Straus, Leon, 805 N. Grand Ave.  
 Streutker, C. E. F., 2410 S. 10th St.  
 Stroen, C. D., 1749 S. Grand Ave.  
 Steedman, J. G. W., 2803 Pine St.  
 Steer, J., 3126 Washington Ave.  
 Stocking, L. C., 1304 Academy Ave.  
 Stockwell, B. E., 2345 S. Broadway.  
 Sullivan, F., 5177 Vernon Ave.  
 Summa, Hy. H., 3707 N. Eleventh St.  
 Summa, Hugo, 2249 St. Louis Ave.  
 Sutter, Otto, Century Bldg.  
 Talbott, H., Humboldt Bldg.  
 Tanquary, J. H., 930 Belt Ave.  
 Taae, E. F., City Hospital.  
 Taussig, A. E., 3519 Washington Ave.  
 Taussig, F. J., 534 N. Vandeventer Ave.  
 Thierry, C. W., 303 N. Grand Ave.  
 Thmuser, L., 2353 S. Broadway.  
 Tiedemann, E. F., 2253 S. Vandeventer Ave.  
 Tooker, Chas. W. Jr., Humboldt Bldg.  
 Tribble, G., 1600 California Ave.  
 Tuholske, H., 465 N. Taylor Ave.  
 Tuholske, M. C., Female Hospital.  
 Tupper, P. Y., 534 N. Vandeventer Ave.  
 Tuttle, G. M., 4519 Washington Ave.  
 Ude, Waldemar, 3531 S. Grand Ave.  
 Valle, J. F., 3303 Washington Ave.  
 Van Hoefen, S. A., 8313 Halls Ferry Road.

Vasterling, Paul, Mo. Pac. Hospital.  
 Vaughan, J. W., 4001 W. Belle Pl.  
 Vogt, W. H., 4977 Lotus  
 Vogt, W. H., 1443 Blair Ave.  
 Vonderau, O. L., 1301 Geyer Ave.  
 Wall, O. A., 4532 Virginia Ave.  
 Wall, O. A., Jr., 3122 S. Grand Ave.  
 Ware, Chas., 1404 Olive St.  
 Warfield, L. M., Chemical Bldg.  
 Weinsberg, Chas. H., 1531 S. Eleventh St.  
 Weinsberg, J. H., 2015 Russell.  
 Wells, H. P., 2313 Washington Ave.  
 Wesseler, F. W., 2308 Gravius Ave.  
 Whelpley, H. M., 2342 Albion Pl.  
 White, C. A., 211 Seventh St.  
 Wiatt, W., East St. Louis, Ill.  
 Wichmann, H. L., 3229 S. Jefferson Ave.  
 Wiener, M., 500 Carleton Bldg.  
 Wilkes, B. A., Linmar Bldg.  
 Williamson, J. W., 5600 Cates Ave.  
 Williamson, L. P., 5600 Cates Ave.  
 Wilson, A., 1514 Wagoner Pl.  
 Wilson, A. M., 615 Humboldt Bldg.  
 Winter, Wm., 3632 S. Broadway.  
 Witherspoon, T. C., Butte, Mont.  
 Wobus, R. E., 2022 Salisbury St.  
 Wolf, A. S., Lister Bldg.  
 Wolf, John, 3869 Flad Ave.  
 Wood, W. E., Century Bldg.  
 Woolsey, R. A., Frisco Hospital.  
 Wright, C. G., 2738 Dickson St.  
 Wyche, Chas., 401 N. Grand Ave.  
 Yahlem, N. N., 1816 Franklin Ave.  
 Yost, W. B., 1119 Union Ave.  
 Young, A. O., 3141 Lawton Ave.  
 Zahorsky, John, 1460 S. Grand Ave.  
 Zoller, C. H., Granite City, Ill.

#### SALINE COUNTY.

Chastain, M. T., Marshall, Mo.  
 Gore, D. C., Marshall, Mo.  
 Gore, A. E., Marshall, Mo.  
 Hall, J. R., Marshall, Mo.  
 Harrison, Wm., Marshall, Mo.  
 Harris, J. E., Marshall, Mo.  
 Howard, J. H., Slater, Mo.  
 Jarvis, W. M., Slater, Mo.  
 Manning, D. T., Marshall, Mo.  
 Richart, G. A., Blackburn, Mo.  
 Shuck, L. J., Nelson, Mo.  
 Spotts, B. M., Marshall, Mo.  
 Stouffer, R. W., Wapton, Mo.

#### SCHUYLER COUNTY.

Bridges, J. B., Downing, Mo.  
 Gerwig, H. E., Downing, Mo.  
 Jones, J. T., Queen City, Mo.  
 Justice, W. H., Lancaster, Mo.  
 Justice, W. F., Lancaster, Mo.  
 Mitchell, E. L., Lancaster, Mo.  
 Mitchell, W. F., Lancaster, Mo.  
 Keller, J. H., Glenwood, Mo.  
 Rambo, J. H., Glenwood, Mo.  
 Zeber, W. H., Queen City, Mo.

#### SCOTT COUNTY.

No Report Received.

#### SCOTLAND COUNTY.

Alexander, W. E., Memphis, Mo.  
 Baker, P. M., Arbela, Mo., R. F. D.  
 Bondurant, W. E. H., Memphis, Mo.  
 Davis, A. L., Arbela, Mo.  
 Edelen, B. H., Gorin, Mo.  
 Foster, G. F., Memphis, Mo.  
 Johnson, F. M., Gorin, Mo.  
 Mackey, Alonzo H., Gorin, Mo.  
 Maynard, G. K., Hitt, Mo.  
 Parrish, E. E., Memphis, Mo.  
 Petty, J. W., Rutledge, Mo.  
 Pile, O. F., Memphis, Mo.  
 Platter, A. E., Memphis, Mo.  
 Shacklett, J. A., Rutledge, Mo.

#### SHELBY COUNTY.

Carson, Wm., Shelbyville, Mo.  
 Dallas, L. W., Hunnewell, Mo.  
 Dobson, D. A., Hunnewell, Mo.

Hangler, C., Clarence, Mo.  
Owens, W. W., Oak Dale, Mo.  
Pollard, H. M., Shelbina, Mo.  
Singleton, D. E., Shelbina, Mo.  
Smith, J. D., Shelbina, Mo.  
White, A., Lakenan, Mo.  
Willis, T., Shelbina, Mo.  
Wood, A. G., Lentner, Mo.  
Wood, A. M., Lentner, Mo.

STODDARD COUNTY.

No Report Received.

STONE COUNTY.

No Report Received.

SULLIVAN COUNTY.

Bowers, H. E., Osgood, Mo.  
Bradley, U. S., Harris, Mo.  
Garner, R. L., Pollock, Mo.  
Hanning, W. L., Humphreys, Mo.  
Herrington, W., Green City, Mo.  
Holliday, S. J., Pollock, Mo.  
Kessinger, Milan, Mo.  
Magee, R. S., Green City, Mo.  
Parsons, Wm., Greencastle, Mo.  
Poole, A. R., Milan, Mo.  
Roberts, J. M., Green City, Mo.  
Shepler, R. H., Mystic, Mo.  
Shriver, C. F., Harris, Mo.  
Taylor, H. L., Greencastle, Mo.  
Tunnell, J. D., Reger, Mo.

VERNON COUNTY.

Buchanan, J. R., Nevada, Mo.  
Callaway, L. H., Nevada, Mo.  
Churchell, E. R., Nevada, Mo.  
Craig, T. B. M., Nevada, Mo.  
Dulin, E. A., Nevada, Mo.  
Johnson, J. A., Nevada, Mo.  
McLemore, T., Nevada, Mo.  
Todd, T. B., Richards, Mo.  
Truex, J. L., Milo, Mo.  
Wilson, G. C., Nevada, Mo.  
Yater, J. M., Nevada, Mo.

WARREN COUNTY.

No Report Received.

WASHINGTON COUNTY.

No Report Received.

WAYNE COUNTY.

No Report Received.

WEBSTER COUNTY.

Beattie, W. R., Rogersville, Mo.  
Bruton, D., Seymour, Mo.  
Highfill, M., Marshfield, Mo.  
James, Ed. T., Marshfield, Mo.  
Rabenan, W. J., Fordland, Mo.  
Trimble, Eli, Seymour, Mo.

WORTH COUNTY.

No Report Received.



## BOOK REVIEWS

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A TEXT BOOK UPON THE PATHOGENIC BACTERIA. For Students of Medicine and Physicians. By Joseph McFarland, M. D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia. *New (5th) Edition.* Octavo volume of 647 pages, fully illustrated, a number in colors. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, \$3.50 net.

In this new edition all the latest discoveries in bacteriology are properly considered, and certain material which has become obsolete has been eliminated.

No further comment seems necessary on McFarland's text book upon pathogenic bacteria. It is a work well and favorably known to every teacher and student.

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ATLAS AND TEXT BOOK OF HUMAN ANATOMY. By Dr. Johannes Sobotta, Professor of Anatomy in the University of Wuerzburg. Edited, with Additions, by J. Playfair McMurich, A.M., Ph.D. Professor of Anatomy in the University of Michigan. Volume II. The Viscera, Including the Heart. With 214 Illustrations, mostly in Colors. Philadelphia and London, W. B. Saunders Co. 1906. Price: Cloth, \$6.00.

The second volume of this splendid work on human anatomy has appeared. It deals with the viscera including the heart. Like its predecessor the volume contains numerous large quarto-size plates representing in colors the anatomic structures with wonderful accuracy and clearness. A third volume will complete this work.

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A TEXT BOOK OF THE PRACTICE OF MEDICINE. For Students and Practitioners. By Hobart Amory Hare, M.D., B.Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital. In one very handsome octavo volume of 1120 pages, with 131 engravings and 11 full-page plates in colors and monochrome. Second edition, revised and enlarged. Cloth, \$5.00, net; leather, \$6.00, net; half morocco, \$6.50, net. Lea Brothers & Co., Philadelphia and New York, 1907.

Well proportioned consideration is given in this volume to the principle and theory of medicine as underlying, explaining and leading up to the main objective point, namely, the practical application of the knowledge. Accordingly the author has taken particular pains to present methods of treatment clearly, and in such a way that they may be put directly into practice.

In this new edition all obsolete matter has been eliminated, all new trustworthy advances incorporated, so that the volume, as it stands, is representative of its subject to date.

# JOURNAL MISSOURI STATE MEDICAL ASSOCIATION

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Volume III

JUNE, 1907

Number 12

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## ORIGINAL ARTICLES

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### PRESIDENT'S ADDRESS.\*

BY C. H. WALLACE, M. D., ST. JOSEPH, MO.

With this meeting, the Missouri State Medical Association fitly celebrates its fiftieth anniversary.

From a membership at its organization in St. Louis in the year 1857 of one hundred and fifty, it has grown steadily and solidly to its present membership of 2,400. Its growth and advancement have not alone been characterized by increase in members, but the profession of the State wholly and individually has kept pace with the wonderful progress in medicine and surgery during the last half century. This society has lived during that period which may be termed the fifty years of medical glory; that period in which more has been accomplished than in all the preceding twenty-five hundred and fifty years.

The endless unfolding of great truths and the frequent discovery of great fundamental principles have followed so rapidly one upon the other that the profession has not been able to digest them all.

This marvelous advance of science has kept popular education so far in arrears that the laity fail to appreciate the full humanitarianism of modern medicine. The public view point of present medical conditions is that of a quarter of a century ago; and the closure of the great gap between medical science and public opinion can be effected only by unity of action, intent upon common good.

The individual saving of life by skilled hands begets appreciation throughout the land, but the great saving to the sum total of human life by preventive medicine and sanitary science fails the perception of the public mind and either passes unnoticed or is soon forgotten.

The enlistment of the masses in support of the needed sanitary reforms in all states must, and can, come only from the united weight of authoritative organization.

Great men with gifted leadership, honest intent and strenuosity

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\*Delivered at the Annual Meeting of the Missouri State Medical Association, Jefferson City, May, 1907.

of purpose may offer boundless hopes of great accomplishments; but the attainment of real success can come only in the loyal and united support of a loving hearted and patriotic soldiery.

Just as the discovery of bacteria and the part they play in the causation of most diseases has been productive of great strides along scientific lines in the last quarter of a century, so have the efforts of medical unity begun to bear fruit in the past few years by the education of the public to an appreciation of the importance of national hygiene, and the great benefits to be obtained both commercially and bodily from preventive medicine.

The transformation of the Island of Cuba from a swamp of sickness, sorrow and death to a habitable land of health and prosperity was brought about by the influence of an organized profession, the support of Federal authority, and the good wishes of an enlightened people;—all lent in upholding gifted medical leadership in the execution of the necessary laws of hygiene.

The application of the principles of modern hygiene in the Canal Zone by the thoroughly competent and efficient General Gorgas of the Army Medical Corp. makes possible the execution of the most gigantic engineering feat and the most important commercial project ever undertaken by man. This great work will be a lasting monument to medical organization.

The speedy check to the recent yellow fever scourge in our sister states of the South by the efficient work of the Marine Hospital Service, aided and abetted by government support, is an admirable example of the effective power of sanitary science.

While much has been accomplished in the past few years by unification yet more remains to be done. The enthusiastic and earnest workers must stimulate the drones to continued action in county, state and national work if our full obligations to mankind are ever to be discharged.

Until within recent years the Army and Navy Departments were almost separate and distinct medical bodies from the regular rank and file. Although splendidly and intelligently manned, they labored against the most adverse conditions. Matters of hygiene and sanitation were regarded by the regular army officer as secondary matters. A sad example of their weakness and ineffectiveness was shown in that blot upon our flag in the late war with Spain when of the young manhood of this country fourteen died of an enemy germinated and harbored around their own camp fire, while one was killed in the fire of battle.

By virtue of our present effective methods we all fight now under one flag and have no fear in the event of future warfare of a repetition of such an unnecessary sacrifice of human life.



The Japanese have demonstrated conclusively to both army and civil authority that medical sanitation must be supreme to effective warfare.

It should be, and I believe, is a source of pride to every loyal physician of this state that the first gun fired in the present active warfare against proprietary and patent medicine frauds was exploded by a distinguished member of this society at the State meeting in St. Louis in 1904. I doubt if ever a paper by a medical citizen of our State has been so fruitful and far reaching in general good as this splendid paper of Dr. W. G. Moore. Not only was it effective in directing medical thought, and enlisting medical men in an active warfare against the nefarious houses growing rich in the name of medicine, but it stimulated honest journalism to an exterminating onslaught.

The creation and maintenance of a board of expert chemists by the American Medical Association for making public the formulae of various medical combinations, thus putting the profession in an enlightened position for selecting the good and discarding the bad; and the stimulation of our law makers to statutory enactments requiring printed formulae upon all drugs offered for public use are the early fruitage of a righteous work just begun. So much for general felicitation.

A few words concerning some of the evils present in our State which demand our attention and our united efforts for betterment.

It is the general opinion that many good reasons now exist for a limitation in both numbers and quality of the annual medical output both in our State and all western states. This needed limitation of medical graduates can come only in the reduction in number or an improvement in the character of our medical colleges.

The recent affiliation of two of the commercial schools of Missouri with Universities is of good omen and was hailed with approval and delight by the better medical element all over our State. With this University espionage immediately came a high requirement for admission, a lessened matriculation and a better equipment of those graduated.

Other University alliances are in process of formation, and with their culmination we dare to predict the death knell of the commercial medical school, which has for so many years put a price on ignorance and flooded our ranks with incompetents.

These commercial schools are born of self interest, perpetuated by a selfish and inordinate desire on the part of the teachers to make an impression upon the student of their individual greatness, rather than to propound and to impart the great fundamental truths of our science.

These student hunters entice the barber from his chair, the mechanic from his bench and the huckster from his wagon, all with im-

perfect educations and push them by roseate pictures into the field of medicine. What can such conditions bring forth, but imperfectly feathered fledgelings who flutter along the marshes and never rise to the dignified heights of the real physician. It is from this class that come our medical anarchists who seek to tear down all efforts toward progression. It is from this class that come our Tyros who rush where Angels fear to tread and call down the reproach of the public upon the science of Surgery! It is from this class that come our abortionists who have never been taught the great moral side of medicine!

It is from this class that come our quacks, charlatans and grafters, who jeopardize the lives, and pauperize the homes of an innocent public!

Who is at fault for this condition of affairs? Certainly not the youth himself who has been badly advised, ill taught and imperfectly manned. The commercial school has the double iniquitous effect of spoiling much good material that under proper educational surroundings would make capable and useful physicians, as well as bringing to the surface much debris that would have otherwise remained hidden in the current of life.

It was well said by Dr. Wetherill, of Denver, in his annual address as president of the Colorado State Association last year: "Institutions like persons have their moral responsibilities. In the communities in which they exist, it soon becomes known whether a certain medical college, or hospital, has a high or low standard of education,—(moral and ethical) and the work it does, and the results it attain, are estimated accordingly. The teaching, environment and atmosphere about such medical schools and hospitals as are connected with John Hopkins, University of Pennsylvania, Columbia and Harvard, stand for all that is best, not only in the science and art of medicine, but also the highest ethical and moral standards. No medical school or hospital can afford to let down the bars and sanction a sacrifice of principles in the fancied interest of its material welfare, as success thus secured can be but temporary, and the unenviable reputation thus acquired endures for years to handicap all better efforts of a later day."

The moral atmosphere of great institutions of instruction extends far into the horizon of life.

The biblical precept, "train a child up in the way he should go and he will not depart from it when he gets old," has a most permanent application to the education of medical students.

The writer was recently mortified at hearing one of the leading surgeons of this country publicly refer to the medical center of our state as being notorious in standards and morals; but knowing that his informant, though talented, was a professional Ishmalite I could probably excuse this imprudent reference. Yet if conditions were what

they should have been and what they bid fair soon to be, this reference could never have been made.

Another universal evil in our state which demands a united effort for its correction is the unlimited hospital privileges extended to all physicians regardless of education and experience.

While needless operations are, as we all know, occasionally performed by those with the most extensive experience and training, through error in diagnosis and judgment; what, but a criminal sacrifice of human life can be expected by the Tyro and novice when hospital privileges are not only offered but tendered by solicitation!

The proper preservation of human life demands that every man who practices medicine should be educated and equipped to such a degree as to care for accidental surgery with a reasonable show of skill. Yet the schools of the most exacting standards fall short in this particular, to say nothing of those of lax standards. On the other hand, as a matter of right and wrong, only those who have been educated for that special purpose should be permitted by a rightly organized profession to do elective surgery. The indication seems to be that the future will demand schools for advanced training for those who desire to do special work; and until this demand is realized and organized, the profession should require a standard for fitness of at least five years as assistant to an active surgeon. With the recommendation of many surgical operations comes the intention of its execution by the skilled surgeon, otherwise the patient had better be left to the chances of spontaneous recovery, which certainly offers a lower mortality.

Another evil prevalent in our state is the stay at home habit which affects a few of our ablest and best equipped men and is a common habit to many less fortunately educated, who specially need the educational influence incident to professional contact.

Not only does the "stay at home habit" rob the profession as a whole of a valuable and entitled assistance, but these stay at homes inevitably drift into the rut of self satisfied content and early reach a limitation to their own usefulness.

Constant and diligent studentship and frequent contact with our fellows are both absolute prerequisites to crown-topped medical efficiency.

We all know those whose attendance upon medical meetings is only occasional and is dependent upon a perfect convenience of time, place and conditions. Each and every such one is derelict in a duty he owes to the profession that gave him birth, and a community that looks to him for the most efficient guidance within his reach.

To this Society, I am greatly indebted for a personal, fraternal and just consideration; and, for the honor conferred, I am keenly appreciative.



## THE SURGEON OF TODAY; HIS ANCESTRY AND FAILURES.\*

BY PAUL Y. TUPPER, M. D., ST. LOUIS.

Although proudly and gratefully acknowledging the wonderful, almost miraculous accomplishments of the modern surgeon, the thoughtful student of the history of ancient surgery is made to pause and think deeply when confronted with the achievements of times prehistoric. The inventor of the modern trephine might well have exclaimed in chagrin, "How these ancients do steal our thoughts." as he pondered wonderingly over the skull of prehistoric man, evidencing undoubtedly that trephining was successfully performed prior to the Christian era. That the human cranium had been trephined in those days, there is now undoubted proof, and, moreover, that the operative procedure was successful, as far as life is concerned, is equally well proven by the fact that bone-healing had taken place at the site of the operation. Yorick's skull in the hand of Hamlet is meaningless contrasted with this, holding up to light as it does the achievements of prehistoric times, and telling eloquently adown the ages the tale of surgical triumphs of centuries long past.

Unfortunately, in the early ages surgery was for a time progressively neglected, and the sister profession of medicine correspondingly dignified and elevated by being made an important part of the duties of the priest. However, we find surgery coming into dignified recognition by the Hindus, and their great Susruta said, "Surgery is the first and highest division of the healing art, least liable to fallacy, pure in itself, perpetual in its applicability, the worthy produce of Heaven, the sure source of fame on earth." Moreover, he tersely condemns narrow specialism in these words: "He who knows but one branch of his art is like a bird with one wing." The modern operation of forming a new nose from flaps of skin taken from the forehead, and other surgical procedures, are described with accuracy in Hindu writings. The importance attaching to the surgery of ancient India is evidenced by the recent organization of the Charaka Club of New York, the object of which is to investigate and bring to light that period when Hindu surgery first asserted itself.

The great respect and reverence in which their dead were held by the early Greeks precluded the possibility of any practical study of human anatomy. Their knowledge was largely speculative, or derived from a study of crude dissections of the lower animals. Notwithstanding this, certain striking advances were made in operative work. Because of their effectiveness in reducing dislocations and caring for

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\*Oration on Surgery delivered at the Annual meeting, Jefferson City.

fractures, medical men of that period were looked upon with great reverence especially in times of war.

In their respective periods, Hippocrates, Galen, Antyllus and others did much to lift surgery from its dark estate. Each successful promise of recognition of the art, however, was followed by a lapsing back into the most disheartening ignorance and darkness. The meager knowledge of human anatomy, as gained by an occasional dissection, generally on the battle-field, served the purpose of imparting some confidence to operators. Notwithstanding this, however, ignorance, superstition and antagonism were most distracting for centuries. The priest, the barber and the bone-setter vied with each other for the honors of the surgical field, and it is recorded that in the eleventh century Henry II, Holy Roman Emperor, was operated on for stone in the bladder by none other than Saint Benedict himself.

Dating from the establishment of the School of Salerno, in the thirteenth century, surgery became established on a more substantial and dignified basis. Anatomical knowledge was exacted of practitioners, and some surgical safeguards were thrown around those submitting themselves for operation. Malgaigne points out that in the sixteenth century the ground-work of pathology was laid by Benivieni, who was the "first to impress upon the profession the importance of searching in the cadaver for the concealed cause of disease." Although this privilege was rarely granted the zealous student, because of the prejudice against dissections, nevertheless much knowledge was gained even from the advantages occasionally offered; and thus was planned the broad base of pathological research, to be perfected with coming years.

The fifteenth and sixteenth centuries marked a continuous struggle between scientific advancement and the persistent recognition of the charlatan. The last named century, however, chronicles the establishment in France of the first special college for the instruction of surgeons. Along with this healthful impetus came upon the surgical stage the illustrious Ambrose Pare, to elevate and dignify the science of surgery, so greatly in jeopardy at the hands of the ignorant, mercilessly preying upon the credulity of all classes. His character and accomplishments are well known, and his achievements served almost immediately to emancipate surgery from the fetters still binding it strongly to ignorance and ineffectiveness. The use of the ligature to control hemorrhage, thereby doing away with the application of the cruel cautery and boiling oil as hemostatics, has made surgery to this day a debtor to this master mind. Until the introduction of anesthetics, two centuries later, the brightest page in the annals of surgery is the one illumined by the accomplishments of Ambrose Pare.

The seventeenth century placed surgery on a higher social and intellectual plane. Amphitheatres were built for purposes of lectur-

ing and demonstrations, and cases were reported and published for the edification of practitioners.

From this time on to the present, surgical history teems with the names of hundreds who, building on the experiences and hard earned knowledge of their predecessors, added to the light already given, until today the surgical firmament shines effulgent with the accomplishments of men and minds, than which no greater ever lived. Continental countries, the British Isles and our own beloved country have vied with each other in surgical invention, research and teaching—the end and aim being the establishment of those scientific truths on which has been builded the surgical superstructure as we see it today.—firm as the Rock of Gibraltar, lasting as the Pyramids, ornate and beautiful as a Corinthian column.

Thus are briefly narrated the steps by which the science and art of surgery have been evolved from the darkness and ignorance of pre-historic times. Among the most learned of earth are those whose energy has triumphed in this cause. The results of their labor and sacrifice are substantially voiced in the hundreds of methods and achievements that today make for the comfort and safety of mankind. Because of these, the hand of disease has fallen palsied to the side, and death itself has been arrested in its relentless course. The present status of surgery is an open book, and so patent are its truths that "he who runs may read." Its achievements have been primarily along the line of new and improved methods of teaching. The didactic courses of two decades ago have given way to recitations, practical work in the various laboratories, and observations at the bedside in well appointed hospitals. Embryology, bacteriology, pathology and practical anatomy are recognized as the fundamental ground work on which all surgical knowledge is builded. The knowledge thus gained is rendered easy of application, because of the recognized advances in local and general anesthesia, aseptic technique, the Roentgen ray and instruments of precision.

Does it not behoove us then, as surgeons, jealously to guard this rich and valued heritage that has come down to us through the ages, an inheritance that with each succeeding decade has been so enriched that it stands out almost a thing complete, to challenge and hold the admiration and gratitude of all mankind? However, this talent has been given us not merely to be guarded jealously; it must be added to. Our every effort must bend in this direction, hoping that by earnest endeavor and faithful application we may be privileged to see strides of progress in our own time, and ourselves a factor in that progress. To that end, the first step should be one of personal introspection. The stream can be no purer than its fountain-head. A man's deeds and accomplishments are no more meritorious than he himself. The surgeon's surgery is rarely better and more honest than the surgeon himself in his relations to his client and his fellow practitioner. Let us



then, as surgeons, briefly inquire into our fitness to stand where we do, as trustees of the science and art of surgery, thus handed down to us.

The surgeon should be ever ready and willing to assume personally the entire responsibility of accidents occurring in the course of his cases. Undignified and unjust is his conduct when he imposes upon the assistant, or the nurse, or the hospital, the onus of an unfortunate result in a surgical procedure. The fact that he consents to operate with given assistance and in a given place makes him solely responsible for the outcome. It is his duty to inform himself to his own satisfaction regarding the suitability of the place of operation, the character of dressings, and the capability and reliability of those to be associated with him. Should the chain break in the weakest link, it is he who should interpose himself in the rent, and acknowledge the weakness his own. Legally and morally this is where the responsibility rests. Aside from this, however, it is certainly the part of candor and manliness in the surgeon himself to assume all, and not point the finger of rebuke or criticism at the associates he has accepted to assist him. Of course, when a result proves that an error has been made somewhere along the line of preparation or technique, earnest and untiring search should be made until the error has been found. Attention should be called to it in an outspoken way, the object being not to mortify or chagrin the one at whose door the error apparently lies, but to so emphasize the danger of the act that a repetition of it will be carefully avoided in the future. In so doing, the surgeon should never lose sight of the fact that primarily he himself is at fault, because all associated with him are so associated by his knowledge and consent, and he presumably is as fully cognizant of their shortcomings as of their merits. The strong likelihood is that the operator himself is the immediate cause of unfortunate results. The likelihood comes from the fact that it is he who does the greatest amount of handling of the tissues and manipulation of delicate parts; it is he who determines the tightness or looseness of ligatures and sutures; and in fact, it is he and none other who does just those things in every operation that generally determine its success or failure. Moreover, it goes without saying that if an operator is careless in the selection of his assistants, he is more than apt to be equally careless in the application of surgical technique that comes under his own hands. Under these circumstances, the unbecoming and wholly unwarranted tirades on the part of disappointed operators, directed against those associated with them, cannot fail to challenge the contempt of the thoughtful and honest observer. Recently a surgeon came to a well appointed hospital to operate, but neglected to bring an inhaler for the anesthetic. The hospital gladly supplied one, which was accepted by the operator and used by his anesthetist. Through some inattention, the ether or chloroform trickled down on the patient's face, causing a troublesome irritation, of

which the patient later complained bitterly. The operator, instead of assuming the responsibility of the accident, for which he was wholly liable, having accepted the inhaler, immediately shifted the blame upon the hospital, and gave vent to a tirade of abuse of those in authority there for having what he termed so imperfect an appliance. The exhibition was so puerile and so disgustingly little that it immediately stamped the man as one wholly unworthy of the dignity that should attach to a generous and high-minded surgeon.

There is today a marked tendency on the part of aspirants for honors in the field of the many specialties, to enter upon their chosen work almost immediately on the reception of their college degree. A year or less of hospital experience is practically the only general preparation and ground-work for special work. Upon this narrow and meager base is to be erected the superstructure of the specialty. Be that specialty one of the lesser fields, or one of wide scope and great importance, the principle is equally wrong: the pyramid is made to stand upon its apex instead of upon its base. The specialty is studied and developed without the basic foundation of sufficient general knowledge and experience, upon which it should be builded. Its scope is therefore a narrow one, and along the lines of this procedure there must necessarily be recorded failures and mistakes both of omission and commission. The practitioner of a specialty that has not been the outgrowth of sufficient years of general practice and training is more than apt to accept as the original disease an affection of a part, which in reality is simply an evidence of trouble elsewhere in the economy. In other words, the effect is accepted as the cause, and a symptom is treated instead of the underlying causative factor being clearly defined and eradicated. The "head and front of offending" is ignored; the fountain itself is not cleansed, but instead thereof, valuable time and endeavor are uselessly expended in the futile effort to purify the polluted stream.

Were the surgeon, as a specialist, primarily a good physician,—full of general knowledge concerning the cause and phenomena of disease and its management, from a medicinal and hygienic standpoint,—how much stronger and more rational would he prove in his surgical work. How clear would become certain conditions that are obscure to the narrow vision and ken of the surgeon whose attainments are not the outgrowth of a broad general preparation in the study of medicine. Affections of certain parts, accompanied by pain, and presenting other evidences of derangement, have too often been attacked surgically, when in truth the apparent lesion is but a local evidence of a general condition. A result has been attacked instead of a cause; a symptom has challenged the attention of the surgeon and engrossed it to the exclusion of the original trouble itself. Such would not be so apt to occur had the surgeon's surgery been the outgrowth of a broad preliminary education and practice in general medicine. Spleens

have actually been removed by the surgeon, for whose scalpel quinine and arsenic might have been wisely substituted, had the operator's early experience led him along the line of the multifarious sequelae of chronic malaria.

The present is a period of Mammon-worship and Mammon-seeking. The greed for gain has taken a firm hold of all classes. The strength and energy of mind and body is expended extravagantly in every walk of life, that self-interest may be advanced, and that emoluments may be heaped up. Mammon-worship claims as devotees the old and the young, the rich and the poor, the prince of finance and the humble but hopeful toiler, the bulls and bears of the stock market, and the uninitiated callow lamb, ever ready to be led to the slaughter. No broad-gauged man disparages wealth or its accumulation, if attained honorably; if, in reaching the greatly sought and ever alluring pinnacle, the weak and less fortunate in the race are not pushed aside and trampled upon. Unfortunately, the act of attaining wealth is too often accompanied by the development of motives most selfish in character. Those traits in a man that are good and noble become less good, for want of healthful moral exercise. Avarice and cupidity take possession of him to the exclusion of traits that ennoble and lift up. His ambition is not to heap up a fortune that, thereby his fellow-man may be benefited, that broad philanthropic plans may be initiated and perfected, but the rather that his coffers may be full to overflowing, and his personal greed may be satisfied.

Unfortunately, this trend, to a greater or less degree, is becoming conspicuous in the medical profession. The time was when the sole aim of the physician or surgeon was to so excel in his work as to be conspicuous among his fellow-men because of his professional attainments; to stand out as one who, because of zealous application and earnest development of God-given talents, had fitted himself to advance the interest and conserve the comfort and safety of those about him. Such was his laudable ambition, and in striving to make all else conspire to that end, he unconsciously lifted himself up to a plane of recognition among his fellow-men that reflected creditably upon the profession he strove to honor. To him often came deservedly the just reward of his toil in the form of a comfortable fortune. Such, however, was not the end to which he strove, but served only to make him better fitted in every way to carry out the intent of his professional endeavor.

Is it thus today? or are not the higher ideals that should possess the mind and intellect of the physician warped by the influence of personal gain and commercialism that surround him on all sides? Is this profession of ours to become one of barter and trade? It rests with those of us who recognize the dignity of our professional ancestry to frown down upon and indignantly stamp out any such tendency. If the hoarding up of wealth is paramount; if this is the end and aim



of our desire; if we are making the practice of medicine and surgery only a means to this end,—then, for the sake of decency, and in deference to our confreres who strive to dignify their calling, let us leave the profession and exert our energies elsewhere. In professional life such energy is undignified and misdirected; on the mart it may prove ideally effective. The so-called surgeon who makes any effort to secure a case, especially if he has in mind his own advancement in any way, is contemptible and wholly lacking in self-respect. Equally so is he who brings his client to the city, and goes from hospital to hospital, and from office to office, seeking out the lowest priced operator to whom he can entrust his confiding patient, or possibly the one who will divide the fee. No patient is safe in the hands of such a surgeon, or such a physician.

Constantly there is held up to the public gaze the spectacle of a surgeon giving so-called "expert" opinion in a court of justice. For this he is paid,—not by the court, or the state, or an impartial party, but by the defendant, or the plaintiff, for whom—in whose behalf—he is supposed to testify. Under the circumstances, is he wholly unbiassed? Is his testimony such that the surgical and technical points in the case will thereby be made clear to the jury? Does he always tell "the truth, the whole truth and nothing but the truth," as he has taken oath to do? Unfortunately, too often that surgeon is selected who in his adaptability can fit his ideas to the case in hand. The spectacle is, to say the least, not a pleasing one. Primarily the best interest of justice is not by this means conserved, and this is necessarily the first and most important matter to be considered. Again, the medical profession is brought into discredit by the testimony of these witnesses,—generally surgeons and neurologists—who consciously or unconsciously become interested parties to the suit. Their testimony, therefore, is necessarily valueless and misleading, and calculated to hold up to ridicule and contempt the profession they represent. That there are expert witnesses whose testimony is always what it should be, of course there is no doubt. My reference is to the chronic expert, whose testimony and time are bought and paid for as is any other commodity on the market. The remedy for this state of affairs rests with the state, or with the courts. An examining board of experts should be appointed, and from this board impartial and disinterested testimony could always be secured in cases where such testimony is necessary for the enlightenment of the court and jury. This is no experiment. In St. Louis today, there is operating an Insanity Commission, composed of able and conscientious alienists and neurologists, appointed by the courts. Their duty is to examine and to testify regarding the sanity or responsibility of criminals under the city's care; and I say it to the credit of this body of gentlemen, that they serve faithfully and willingly, and without pay. Similar boards should be appointed by the State, to

pass upon cases, surgical as well as neurological, and a dignified recompense should attach to the retaining of this expert service.

Such then are some of the acts that serve to compromise the dignity of the surgeon of today, and detract from that honorable recognition which is justly his. Possibly they have been too strongly emphasized, or brought too brusquely under the limelight of criticism. If so, it is solely with the intent to do good, to purge our noble craft of all that tends to detract from its high estate. The blighted and withered bough must be recognized ere it can be severed from the tree whose beauty and symmetry it mars.

How pleasing, however, and altogether engaging, is the study of those nobler attributes that so richly adorn the character of the true surgeon, and that stamp upon his deeds the seal of generous approval. The transition is as if from darkness into day. The light and beauty of Raphael's "Transfiguration" is rendered the brighter and holier by the presence of the demented lad in the foreground of the canvas. Let us then, while diligently learning the lesson so forcibly impressed by failure and error, draw our inspiration and encouragement from those attributes of character that voice themselves in the noble deeds and achievements of the surgeon of today.

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## THE FUTURE OF MEDICINE.\*

BY WM. F. KUHN, M. D., FARMINGTON, MO.

The future of medicine and the medicine of the future may or may not be the same. The medicine of today is an undeveloped science that may find its complete development in the near future, or it may die for lack of scientific leaders. Hence the medicine of the future may be hysterical faddism, or by a process of reversion to original types, may again become two-thirds superstition and one-third bone-set and chamomile tea.

If the practice of medicine has been unscientific the fault lies not in the science but in its imperfect application through ignorance of the science. The failure to demonstrate the geometrical problems that the square of the hypotenuse is equal to the sum of the squares of the other two sides, is not the fault of the problem, but the geometrical ignorance of the demonstrator. The practice of medicine therefore, is not necessarily the practice of the science of medicine. A doctor may practice medicine, but he may not practice the science of medicine.

The old fossil, of happily by gone days, who was a natural born doctor, practiced medicine; but he was as ignorant of the science of medicine as an osteopath—and that is the limit.

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\*Oration on Medicine read at the Annual Meeting Missouri State Medical Association, May, 1907.

The application of the science of medicine to alleviate the ills that human flesh is heir to is an evolution from simpler forms. Years and ages have been required to permit it to evolve as far as it has to-day. I use the word "permit" in this sense; that the medical profession has not to a large extent been awake to the possibilities of the science; and have thus prevented this evolution in a more rapid degree.

When the medical profession have found something good, it has cackled over it like an old hen laying an egg; but has not gone on laying more eggs.

There is nothing more nauseating than for some worthless, useless fellow to try and bolster up his nothingness by pulling on his fellow beings, on all occasions, his family tree and regaling them with his glorious pedigree. Like the politician in convention assembled, he is eternally pointing with pride. I have sat under the droppings of the medical orator as he pointed with pride at Jenner, John Hunter, Lister, Galen, and even hory old Aesculapius. But the day is rapidly passing when family trees and pedigrees will take the place of worth, activity and doing.

Doctor, don't you think that it is about time to stop boasting and living in the past?

The science of medicine has many glorious beacon lights along its shores but suffering humanity does not care about these; they ask, "What are you doing?" It is well to remember that pedigree may beget a man but it may also beget a dunce. It is not what your ancestors in medicine have done but what are you in the city, you in the little country town, doing for the future of scientific medicine.

The future of scientific medicine depends upon how many of the "Whys" of medicine are answered. Its growth up to date, whether slow or in mighty strides, has depended absolutely upon the solution of the "Whys."

No man can call himself truly happy that has not passed through the trying ordeal of that animated interrogation point, his child, with its ever ready query "Why Papa"? The "Why" in that child's mind is the beginning of the evolution of thought, the reason for things.

"Turpentine on a wound is healing," so said our Grandmothers. The "Why" of it, placed it among our best general antiseptics. "Calomel dusted on the proud flesh," said the old practitioner, "promotes sloughing and healing." The "Why" of it gave us an excellent intestinal antiseptic. Quinine is good for fever and ague said the inhabitants of the swamp land. The "Why," of it gave us the antidote to the malarial plasmodium.

The whence and the why of malarial and yellow fevers have in turn been answered. The "Why" of immunity is receiving its answer in the opsonic power of the blood.

The disappearance of the scientific interrogation points along



the highways of scientific medicine, marks its advance, and must determine its future.

The growth of antiseptics was strangely slow, and nearly fifteen years passed from the time that Lister first proclaimed it before it was universally adopted.

When we compare the slow advance of medical science prior to 1890, and its wonderful strides since then, the query naturally arises as to the cause.

In determining the cause of this condition, in it will be found the answer to the question, "What of the future of medicine?"

Many of us here to-day received our education in the slow age but have been compelled to practice in the more advanced age. Many of us can recall the first case of surgery under antiseptic conditions, as well as the shock we received when broken doses of calomel supplanted kino, rhatany and opium in diarrhœa of children.

In 1884 I saw the first case of antiseptic surgery ever performed in Jefferson Medical College by the late Dr. John H. Brinton. In the same year I saw the younger Pancoast do an exceedingly dirty piece of surgery, as we would call it to-day.

The advancement of scientific medicine has not been due to the practice of surgery or internal medicine, but it has been due to the investigation along collateral lines. The bare routine of practicing surgery, medicine or any of the specialties has never discovered or developed a single scientific fact. The non-advance of the practice of the healing art was due to the fact that doctors sawed bones, sewed flesh, felt pulses and gave medicine. We loafed along the highways. It remained for the investigators, the thinkers, the students of the collateral sciences to give to medicine its real life and impetus.

The microscope was the open door through which all must enter. It was the magic wand that has made great things possible. Yet but a few years ago it was considered a mere plaything and our leading medical colleges could only boast of a botany glass.

It was not a physician that made this possible; nor was it a physician who saw the blood first course through the capillaries and who discovered the lowest forms of life.

Who, but Leeuwenhoek, a glass grinder, first demonstrated to vision, the continuity of artery with vein by means of capillaries, and who first discovered bacteria. Schwann, before he studied medicine, made a Pasteur and Lister possible by establishing the cell theory of plant and animal life and was the forerunner in histology. Spallanzani, a natural scientist, exploded the theory of spontaneous generation and established the science of biology. Tyndall, the great English physicist and naturalist, also a pathologist, was the inspiration of Pasteur. Huxley, an English scientist, was the great teacher in biology, and proclaimed that protoplasm was the basis of life. Haeckel, the great German scientist and Darwin gave us in their theory of

evolution, that important study of medicine to-day, embryology. Le-Conte, an obscure country doctor in Georgia, forsook his pill bag to study the natural sciences and died, while Professor in California University, America's greatest Christian evolutionist, geologist, naturalist and biologist.

These men were not physicians but they gave to medicine, or rather unfolded to the physician the science of medicine. Medicine was at a stand still and became almost purely empirical until the scientific men in the collateral sciences unlocked Nature's secrets and unfolded to empirical medicine a rational basis and gave it life.

This wealth of knowledge and research, as developed and taught in the sciences of biology, embryology, histology, pathology, bacteriology and physiological chemistry, thrust themselves into our medical schools, *volens nolens*.

The investigating, thinking physician grasped and utilized this store house of research and the names of Pasteur, Lister, Koch, Behring, Metschnikoff and Reed, have been made immortal. Medical science has come to its own through its handmaids, the collateral sciences.

When medical science came to her own, her own hesitated to receive her: but she was persistent in her demands, and gradually the two years course of study gave way to three years course, and after much opposition by the proprietary colleges, a four years course became a fixed fact, the first and second year of this course being almost exclusively devoted to the study of the collateral sciences. We old, gray and bald heads stand and wonder that so much has been accomplished in so few years. The old days of merely listening for two years, have been replaced with work and research for a period of four years.

A few years ago at a medical banquet, I stated that not many years would elapse before medical education would be forced into our State and endowed universities, and that this would come whether the doctor wished it or not. Medical science is progressive and would necessarily seek our universities that it might be glorified. No pent up Uticas could contract its powers.

Since then our whole system of medical education has been changed; not only has scientific medicine demanded the larger opportunities that State and large endowed universities could furnish for the proper study and investigation, but it has also demanded a higher educational qualification in its matriculants.

Academic and collegiate education preparatory to the study of medicine has become absolutely essential. To study the science requires preparation in mental discipline, a discipline that our common schools, and even our high schools do not furnish. A preparation that does not extend beyond the three "R's" would make a sorry spectacle of itself in the science of medicine to-day.

Yet it is in the memory of us all when a great cry went up against any educational requirements; when medical college trustees fought step by step every law that would even demand a lowest grade teacher's certificate as a necessary qualification. "Why?" Because they thought it would be ruinous. Even a dean of a medical college issued a manifesto against such an outrageous law.

The only serious defect in the educational qualification Act passed by the 44th General Assembly is the clause: "Or a certificate from the County School Commissioner certifying that they have passed satisfactorily an examination equivalent to a grade from an accredited High School." If some County Commissioners or examiners were not a purchasable commodity, all would be well. For I well remember when a medical college in our State purchased teacher's certificates at \$3.00 per head for its freshman class.

The greatest hindrance to scientific medicine, now happily lessening, has been the character of our medical colleges in the West. Not only have they been false to a great science, but they have betrayed the young man who came honestly seeking. "He asked for bread and they gave him a stone."

If the officers and the self-dubbed professors of these so-called medical colleges, were called upon tonight to render an account at the Great White Throne for the lies told in their annual announcements, what a wailing there might be, exclaiming, even here this evening, "how can we escape so great a damnation."

As a matter of protection an Association of American Medical Colleges was formed. This caused the annual announcements to lie even harder and longer than before. Some claim to give a complete two years course in all the collateral sciences when they had in their laboratory but one microscope, a Bunsen burner and a half a dozen test tubes. Is it any wonder that the Goddess of Medicine wept bitter tears of Lydia Pinkham's Compound into a pot of antiphlogistine.

Then you and I and all of us fell down, while soothing liquizone flowed over us.

With the continued advance of educational qualification, the doom of the proprietary medical colleges is written. When the requirements shall rise to a collegiate or university standard, the chief hindrance to medical progress will have been removed.

The plea that a higher educational qualification will shut out many a worthy young man is as absurd as to say that the physical requirements to enter West Point shuts out many worthy young men from becoming Major Generals, or the long and difficult course of study prevents some one from becoming a competent Civil Engineer.

Why is this senseless clatter raised only in our own profession? The most difficult, requiring the greatest painstaking and the most scientific research of them all. Dean Swift has tersely stated "That tubs should stand on their own bottoms."



The future of medicine must depend upon the recognition and application of scientific data. It must be a rational, and not an empirical process. When this is done, then the medicine of the future will have behind it the keenest, best poised and most observant intellects of the world. The strange condition exists today that the science of medicine is ahead of the doctor and the doctor is ahead of the age. The general intelligence of the masses was never higher, yet fads, fakes and fools were never more numerous. It seems as if with the increase of general intelligence, the world is becoming hysterical in reference to medicine.

Medicine was never more discredited and paragraphed; yet it is progressing, and taking a deeper and firmer hold upon the thinking men and women. You may say, "How can this be, when we look upon the vast horde of Eddyvites." Please bear in mind that I said the *thinking* men and women; an Eddyvite never was accused of thinking.

The flippant jest at medicine, by many people, is not directed at the science of medicine, but at the kind of medicine that some doctors keep on exhibition.

When in the history of the world has scientific medicine demonstrated its utility and power more effectually, and enlisted the support of the masses, than on the subject of tuberculosis? The banishment of yellow fever from our country, from Cuba, the Philippines and the canal zone, has attracted the attention of the scientific as well as the unscientific classes, so that the scientific aspect of medicine has received due credit and its wonders eulogized.

Scientific medicine will win the plaudits of the world in spite of the doctor with his small cranium, stocked with proprietary medicine.

Would you have scientific medicine applauded and win the confidence of the masses, represent it correctly but do not misrepresent it.

We realize that many physicians have not jolted a neurone in their gray matter with a medical idea for years. They do not have to, as the detail man, with his proprietary stuff, does his little thinking for him.

If scientific medicine depended upon the doctor, who has mortgaged his little brain to the proprietary medicine sampler, then the future of medicine will be as that in the Hoosier School Master, "Corn sweats and calamus."

The future of medicine will be a public educator. Today the masses can discuss intelligently every science and subject except medicine. They know something of law, theology, the natural sciences, political economy and politics, but of medicine, nothing. What they do know has been gleaned from an almanac or the cook book.

The medical man must take his place by the side of the school teacher, the lawyer, the minister. Among his patrons he is an educator, but before the public he stands as a nonentity.

The field for a general medical instruction is large and increasing with years. The farmer, the lawyer, the minister, even the liquor interest, in fact, every trade and profession, participates in public affairs and presents their humanitarian or selfish interest to the people. Why does not medicine do it?

The medical profession has no selfish interests to present, nor special privileges to urge. Its aims are altruistic and humanitarian.

The claims of scientific medicine have not been recognized in civil affairs, and even in those institutions where medical science should reign supreme she has been made the foot-ball of the political harlot.

Until very recently the voice of scientific medicine was unheeded, but today the politician has begun to place his ear to the ground to ascertain the direction in which the army of patriotic, not political, doctors are marching. The civic league, which every crook hates, is the dread of the trimmers, and the doctor's civic league can do as effective service throughout the state as it did in Kansas City last fall.

The science of medicine is non-partisan, non-political, therefore every State Board of Health, educational or eleemosynary institution should be placed on a non-partisan basis.

A partisan board is not necessarily corrupt; I firmly believe that the partisan boards are made up of honest and capable men, but there is a something that permeates a partisan board that makes it susceptible to a raid of the political buccaneer, and it creates the impression that state institutions are the legitimate prey of the political neoplasm in whose territory such an institution is located.

This State Medical Association should place itself on record and work to the end that every State Board shall be divested of its political character and non-partisan boards substituted.

As an illustration, compare our State University with our State Hospitals. The University of Missouri has made greater advances in the last few years than any other University in the land. She stands as a credit to the state and a just pride to every Missourian. But our State Hospitals, when examined along medical lines, stand today just where they stood 15 to 20 years ago. Why is this difference? Progress in one, inertia in the other. No one will for a moment question the fact that equally as honest and efficient men are on the Boards of the State Hospitals as on the Board of Curators. This difference does not lie in the Boards but in the system. The Board of Curators is a non-partisan body. The Boards of Managers of State Hospitals are political ones. Therein lies the virus. Will the physicians of Missouri furnish the antidote?

The future of medicine as thus outlined, by giving to it the wider field for research and investigation that our universities offer, by raising the standard of the educational qualifications, that men may learn how to think, and by the physician being a public educator, the future of medicine will be unlimited and immeasurable.

Who can prophesy what its achievements may be even in another decade? Except this that we shall know more, wonder yet hope and long for more.

The glory of scientific research with its aims unselfish and self-sacrificing is not an empty bauble. It is not an ignis fatuus, "that bewitches and leads men into pools and ditches," but a glory that finds its reward in having, as an intelligent and sentient man, performed his allotted task with mind, heart and soul enlarged to grasp from nature's bounteous resources the balm that bears healing in her wings.

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## EDITORIAL.

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### THE FIFTIETH ANNUAL MEETING.

The fiftieth annual meeting was the most successful meeting in the history of the organization. The registration book contained the names of 334 members, but this does not represent the whole number present as a considerable portion neglected to register. A list of those who registered is printed on another page.

The open-air meeting which had been arranged for by the Cole County Medical Society for the entertainment of the members and in celebration of the semi-centennial, had to be abandoned on account of inclement weather. The address by Governor Folk and the response by Dr. Outten, the president's address and the orations on medicine and surgery, were delivered at the capitol building on the evening of the second day. Fifteen of the twenty-one living ex-presidents were present and occupied seats on the platform with the other speakers. Each one spoke briefly in response to a call for extemporaneous talks.

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### THE HOUSE OF DELEGATES.

The House of Delegates met promptly on the morning of the first day and transacted business with such despatch that by noon all routine business seemed to have been disposed of. The afternoon session met to hear the report of the Judicial Council but that body was unable to report because of important questions concerning some of the Councillor Districts. The meeting therefore was adjourned until Wednesday morning when the Council made its report which was adopted. At this session several resolutions were introduced. These provoked considerable discussion and consumed much of the morning of the second day, thus interfering with the work of the scientific sections. All these resolutions should have been introduced on the

afternoon of the first day. The House of Delegates convened again on the morning of the third day to hear the report of the Nominating Committee. This report did not seem to have been formulated to meet the wishes of the general body and additional nominations were made from the floor. The committee also made a radical departure from the established customs of the Association, apparently without having properly weighed the general sentiment of the members concerning such unusual action, and offered nominations for officers not within the province of the House of Delegates to elect. This action caused considerable discussion and consumed more time and was finally, and very properly, ruled out of order. However, all questions were disposed of in rather good time considering the unusual innovation attempted.

The workings of the body now seem well defined and firmly established. In future meetings all business of the Association not pertaining strictly to the scientific program should and can be disposed of on the first day of the meeting. The report of the nominating committee if this body will discharge its duty intelligently and in harmony with the wishes of the general body, of which it is but the mouthpiece, and the election of the president and orators, on the morning of the third day, should not consume, altogether, more than one hour.

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#### OFFICERS FOR 1907-1908.

The following officers were elected at the Jefferson City meeting for the year 1907-1908:

President, W. S. Allee, Olean; first vice president, Thos. B. Cook, Rayville; second vice president, A. H. Vandivert, Bethany; third vice president, Chas. Hough, Jefferson City; fourth vice president, J. P. Dunigan, Holiday; fifth vice president, O. F. Pile, Memphis; secretary, A. W. McAlester, Jr., Kansas City; treasurer, J. Franklin Welch, Salisbury. Councillors: 8th District, L. W. Dallas, Hunnewell; 10th District, Woodson Moss, Columbia; 11th District, W. B. Dorsett, St. Louis; 12th District, F. J. Lutz, St. Louis; 14th District, F. L. Keith, Flat River (to fill the unexpired term of Dr. Kuhn); 27th District, D. R. Corbin, Bloomfield; 28th District, N. P. Wood, Independence; 29th District, C. L. Evans, Oregon. For Committee on Public Policy and Legislation: C. E. Fulton, Springfield; H. E. Pearse, Kansas City; Geo. W. Wilson, Nevada.

The next meeting will be held at Springfield.

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#### THE PATHOLOGICAL EXHIBIT.

There was more or less difficulty in working out ways and means to accomplish the end desired at the exhibit of normal and pathological specimens, but the results showed the practicability of the enter-

prise. Specimens were sent from St. Louis, Kansas City and Columbia and a very creditable showing was made. It was, however, not as good as it could and should be. That was the fault, not of the instigators, but of the proceeding being in the nature of an experiment.

There were two drawbacks to this exhibit being of the importance that it deserved. In the first place, from the nature of the building, the specimens had to be placed in a room that was out of the direct path of the visitors. Secondly, it was not possible, as had been arranged, to have some one constantly present to explain the specimens.

Such an exhibit can be of the greatest value to the profession in general only under certain conditions. Not very much can be gained by looking at a specimen concealed in a labelled jar. To be of the greatest good such specimens should be capably demonstrated. That would suggest the following method at future meetings: Have a definite time arranged when the exhibitors could give a brief but comprehensive discussion of the tissues shown; let this appear on the printed program; have the exhibition in a convenient location and arrange for explanatory talks concerning the conditions presented.

The showing for this, the first time, was very encouraging, but it has taught us how much more can be done along this valuable and important line.

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The Missouri State Sanitarium for Incipient Tuberculosis at Mt. Vernon, will be formally opened on July 1st. The new board of managers recently appointed by the Governor met on May 16th and organized by electing the following officers: President, Dr. J. L. Eaton, Bismarck; vice president, Dr. William Porter, St. Louis; secretary, W. H. Hohenscheid, Rolla; superintendent, Dr. W. M. Bayliss, Columbia.

The institution is ideal in every respect and is said to be an improvement over any similar state institution. Missouri is the first state west of the Mississippi river to take this advanced step in the treatment of tuberculosis.

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In order to publish the complete proceedings of the annual session we have omitted all reports from county societies. Next month we will publish all reports held over from June and all additional reports sent in for July. We hope reporters will be prompt in sending reports of the meetings. All reports received by the 20th of the month will appear in the next month's issue.

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The death of Dr. John Wesley Trader, one of the ex-presidents of the Association, was announced during the convention at Jefferson City. For almost half a century he had practiced medicine in this state. Death called him while his professional brethren were gath-



ered together in annual convention—a fitting close to a long, useful and honorable career. We will publish a full obituary in our next issue.

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A number of the graduates of the Missouri Medical College met at the Madison House during the meeting at Jefferson City and organized the Alumni of the Missouri Medical College. Dr. Tinsley Brown was elected president, Dr. D. C. Gore, vice-president and Dr. W. A. Braecklein, of Higginsville, secretary. The alumni of Missouri Medical College are invited to send in their names for enrollment as members. At the next annual meeting arrangements will be made for an annual banquet.

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The June number of the *Annals of Surgery* promises to equal the great issue of that periodical for December, 1904, as a "star" number. Among the contributors will be Dr. A. T. Osgood, of New York; Dr. Nathan Jacobson, of Syracuse; Dr. Edward L. Keyes, of New York; Dr. Clarence A. McWilliams, of New York; Dr. John A. Bodine, of New York; Dr. J. Collins Warren, of Boston; Dr. Wm. J. Mayo, of Rochester, Minn.; Dr. R. C. Coffey, of Portland, Ore.; Dr. Geo. Chandler and Dr. Leon K. Baldauf; Dr. Max W. Myer of Columbia, Mo.; Dr. W. W. Keen, of Philadelphia. There will be eight fine illustrations in color, of which great things are expected. The price of this number will be one dollar.

# FIFTIETH ANNUAL MEETING OF THE MISSOURI STATE MEDICAL ASSOCIATION.

CAPITOL BUILDING, JEFFERSON CITY, MAY 14, 15, 16, 1907.

## MINUTES OF THE HOUSE OF DELEGATES. FIRST DAY—Tuesday, May 14th, 1907.

### MORNING SESSION.

The House of Delegates was called to order at 9:45 a. m., by the president, Dr. C. H. Wallace.

At roll call the following delegates had qualified:

COUNTY.	DELEGATE.	COUNTY.	DELEGATE.
Adair .....	James Hanks	Jefferson.....	A. H. Hamel
Andrew.....	E. C. Bennett	Lafayette.....	W. A. Braecklein
Barton.....	T. H. Duckett	Lawrence-Stone.....	C. A. Moore
Barry.....	Wm. N. West	Laclede .....	Herbert Alt
Bates.....	T. C. Boulware	Livingston.....	R. Barney
Benton .....	M. Dillon	Monroe.....	C. H. Dixon
Buchanan.....	{ P. I. Leonard Chas. Wood Fassett	Macon.....	C. W. Reagan
Boone.....		Miller.....	Frank DeVilbiss
Callaway.....	F. G. Nifong	Mississippi.....	A. W. Chapman
Camden.....	J. T. Harrison	Moniteau.....	W. R. Patterson
Clay.....	G. M. Moore	Nodaway.....	F. R. Anthony
Caldwell.....	J. M. Allen	Phelps.....	S. L. Baysinger
Clark.....	W. T. Lindley	Platte.....	S. Redmon
Cape Girardeau.....	J. R. Bridges	Pettis.....	W. J. Ferguson
Cedar.....	G. W. Vineyard	Ralls.....	T. J. Downing
Chariton .....	R. O. Crawford	Ray.....	R. L. Hamilton
Clinton.....	Oliver McEwen	Stoddard.....	D. R. Corbin
Cole.....	J. A. Franklin	Saline.....	D. F. Manning
Daviess.....	J. L. Thorpe	St. Clair.....	D. B. Williams
DeKalb.....	W. L. Brosius	Scotland.....	A. E. Platter
Gasconade-Maries-Osage	R. A. Evans	Sullivan.....	J. P. Dunegan
Gentry.....	W. H. Brewer	St. Francois.....	Frank L. Keith
Greene.....	H. B. Landis	St. Louis Co.....	R. D. Moore
Holt.....	C. E. Fulton	St. Louis City.	Paul Y. Tupper
Harrison.....	C. L. Evans		John C. Morfit
Howard.....	F. H. Broyles		E. Lee Dorsett
Henry.....	U. S. Wright		John Green, Jr
Johnson .....	J. R. Hampton		E. M. Porterfield
Jackson.....	Murray		L. Williamson
	Jabez N. Jackson		O. F. Ball
	N. P. Wood		K. W. Millican
	F. E. Murphy		James Stewart
	Robert T. Sloan		J. R. Lemen
Jasper.....	J. P. Kanoky		M. G. Seelig
	R. L. Neff	Vernon.....	T. B. Todd
		Worth.....	A. C. Long

The President stated that he had no formal message for the House to consider at this time other than to suggest certain changes

in the By-Laws which changes he believed would facilitate a more expeditious transaction of the business of the Association. The changes he suggested were as follows:

Amend Chapter V by adding a new section to be known as section 5, as follows:

Section 5. Each section shall elect its own officers consisting of a chairman, a vice-chairman and a secretary.

Amend Chapter VI, section 4, as follows: Lines 1 and 2: strike out the words "acting with the committee on scientific work, shall prepare and issue the programs for and," and insert in lieu thereof the word "shall."

In line 20 strike out the words "He shall act as" and strike out all words in line 21.

Adding a new section to be known as section 5, as follows:

Section 5. The secretaries of the sections shall act as assistant secretaries of the Association.

Amend Chapter VIII, section 2, by striking out all the words in the second line preceding the word "shall," and inserting in lieu thereof the words, "the chairmen and secretaries of the various sections, who."

Dr. Morfit moved that a committee be appointed to consider the president's report in connection with any other changes in the constitution and by-laws that might be presented, in order to save time. Seconded and carried.

The chair appointed the following members on this committee: Doctors Franklin E. Murphy, Kansas City; J. C. Morfit, St. Louis; F. J. Lutz, St. Louis; F. B. Hiller, Kahoka; F. L. Keith, Flat River; and F. R. Anthony, Maryville.

The report of the Committee on Scientific work was then read by the chairman, Dr. C. M. Nicholson. (See page 794.)

Report of Committee was adopted.

Reading of Report of the Committee of Arrangements by Dr. Hough.

On motion the report was adopted.

Reading of the report of the Committee on Public Policy and Legislation by the chairman, Dr. F. J. Lutz. (See page 790.)

Moved by Dr. John C. Morfit that the Secretary of the Association be instructed to express the thanks of the Association to the Board of Health and others to whom the Association was indebted for aid, for their co-operation in public matters, said expression of appreciation to be adopted as an amendment to the report of the Committee on Public Policy and Legislation. Seconded and carried.

On motion the report as amended was adopted.

The report of the Committee on Publication was read by the chairman, Dr. Nicholson. (See page 795.)



On motion report was adopted as read.

The report of the treasurer, Dr. J. Franklin Welch, was read, and on motion referred to the Judicial Council. (See page 796.)

On motion of Dr. Lutz the treasurer was asked to state the amount of funds on hand. Dr. Welch stated that there was a balance of \$5,497.33, besides some \$200 that had been paid in at Jefferson City.

The secretary, Dr. Nicholson, then presented his report and on motion it was adopted as read. (See page 793.)

The secretary presented his formal resignation.

It was moved by Dr. John Green, Jr., that the resignation be accepted, and that the thanks of the Association be extended to Dr. Nicholson for his very efficient service as secretary of the Association. Seconded and carried.

Dr. Lutz moved that a formal vote of thanks be extended to Dr. Nicholson. Seconded and by standing vote unanimously carried.

The report of the Judicial Council was read by the chairman, Dr. F. J. Lutz. (See page 787.)

Dr. Williamson moved that the report be received and adopted and that the action of the Council in filling vacancies during the interim of the Association be concurred in. Second and carried.

The following gentlemen were named for the Nominating Committee: Doctors R. D. Moore, St. Louis County; F. H. Broyles, Harrison County; N. P. Woods, Jackson County; J. L. Thorpe, Cole County; J. R. Lemen, St. Louis City; Frank L. Keith, St. Francois County; F. B. Hiller, Clark County; R. O. Crawford, Cedar County; and Oliver McEwen, Chariton County; J. W. Heddens, Buchanan County.

On motion the secretary was instructed to cast the vote for the ten gentlemen in nomination, which he did and they were declared duly elected.

For the election of Delegates to the American Medical Association the following gentlemen were placed in nomination: Dr. F. E. Murphy, Kansas City, two years; Dr. C. M. Nicholson, St. Louis, two years; Dr. Wm. Frick, Kansas City, two years; Dr. A. R. Kieffer, St. Louis, two years; Dr. F. R. Anthony, Maryville, one year; Dr. O. B. Campbell, St. Joseph, one year; Dr. Kieffer resigned in favor of Dr. Nicholson.

On motion the secretary cast the unanimous ballot for the two gentlemen nominated for one year, Doctors Anthony and Campbell, and they were declared elected. Dr. C. M. Nicholson, St. Louis, and Dr. F. E. Murphy, Kansas City, were elected for a term of two years each.

Election of alternates was then taken up and the following gentlemen were nominated: Dr. W. E. McKinley, Denver, as Dr. Campbell's alternate; Dr. Frank B. Hiller, Kahoka, alternate for Dr. An-

thony; Dr. W. T. Elam, St. Joseph, alternate for Dr. Nicholson; Dr. Frank L. Keith, Flat River, alternate for Dr. Murphy.

On motion the secretary was instructed to cast the unanimous ballot of the House of Delegates for the alternates.

On motion Dr. Chas. Wood Fassett was elected a member of the nominating committee in the place of Dr. Heddens who was not in attendance at the meeting.

On motion the House adjourned to meet at 4 p. m.

#### AFTERNOON SESSION.

The meeting was called to order at 4:45 p. m., Dr. Wallace in the chair.

The Committee appointed to consider the changes in the By-Laws reported as follows:

Your Committee recommends the adoption of the following changes in the By-Laws, proposed by your President in his address to the delegates in session at the 1907 meeting.

#### AMENDMENTS TO THE BY-LAWS.

Amend chapter V by adding a new section to be known as section 5.

Section 5. Each section shall elect its own officers consisting of a chairman, a vice chairman and a secretary.

Amend Chapter VI, section 4, as follows: Strike out of lines 1 and 2 the words "acting with the committee on scientific work, shall prepare and issue the programs for and," and insert in lieu thereof the word "shall;" in line 20 strike out the words "He shall act as" and strike out all of line 21, so that this section when amended shall read as follows:

Chapter VI, Section 4. The Secretary shall attend all meetings of the Association and of the House of Delegates, and he shall keep minutes of their respective proceedings in separate record books. He shall be custodian of all record books and papers belonging to the Association, except such as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Association which come into his hands. He shall provide for the registration of the members and delegates at the Annual Sessions. He shall keep a card index register of all the legal practitioners of the state by counties, noting on each his status in relation to his county society, and upon request shall transmit a copy of this list to the American Medical Association for publication. In so far as it is in his power he shall use the printed matter, correspondence and influence of his office to aid the Councillors in the organization and improvement of the county societies, and in the extension of the power and usefulness of this Association. He shall conduct the official cor-

responsiveness, notifying the members of meetings, officers of their election and committees of their appointment and duties. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

In order that the Secretary may be enabled to give that amount of time to his duties which will permit of his becoming proficient, it is desirable that he should receive some compensation. The amount of his salary shall be fixed by the House of Delegates.

Add a new section to be known as section 5, as follows:

Chapter VI. Section 5. The secretaries of the sections shall act as assistant secretaries of the Association.

Amend Chapter VIII, Section 2, by striking out all the words in the second line preceding the word "shall," and inserting in lieu thereof the words "the chairmen and secretaries of the various sections, who," so that this section when amended shall read as follows:

Chapter VIII. Section 2. The Committee on Scientific Work shall consist of the chairmen and secretaries of the various sections. It shall determine the character and scope of the scientific proceedings of the Association for each session, subject to the instructions of the House of Delegates, or of the Association, or to the provisions of the Constitution and By-Laws. Thirty days previous to each Annual Session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented, which order shall be adhered to by the Association as nearly practicable.

Your committee further recommends that the President appoint a committee, to be known as the Revision Committee, to which all suggestions and recommendations for changes in the Constitution and By-Laws be addressed, this committee to render a report, which report be published in the January, 1908, number of the JOURNAL for the perusal and study of the members of the Society.

JOHN C. MORFIT,  
F. J. LUTZ,  
F. B. HILLER,  
W. S. KEITH,  
F. R. ANTHONY,  
FRANKLIN E. MURPHY, Chairman.

*The Committee.*

On motion the report was adopted.

The House adjourned at 5:45 to meet Wednesday morning at 8:30.

SECOND DAY—Wednesday, May 15th, 1907.

MORNING SESSION.

The House of Delegates was called to order at 9 o'clock by the President.

The following report from the Judicial Council was read by Dr. W. B. Dorsett, Vice Chairman of the Council:



## REPORT OF THE JUDICIAL COUNCIL TO THE HOUSE OF DELEGATES, MAY 15, 1907.

The Judicial Council begs leave to make the following report. The report of the Treasurer made to the House of Delegates which you referred to the Council for action, was submitted to an auditing committee composed of Drs. Ryland, Hypes and Devillbiss, who, after a careful examination of the receipts and vouchers, pronounced the Treasurer's accounts correct and so announced in a formal report to the Council.

The Council also heard reports concerning the various councillor Districts as to the condition of the various county societies, their membership, scientific work done at the various meetings and the general condition of the profession, all of which give evidence of very gratifying progress. The great interest which is being taken by physicians throughout the state in the matter of organization is shown by the suggestions which came to the Council from the delegates representing various county societies, who appeared before us and urged means for the better organization of their respective districts. In conformity with these suggestions the Council respectfully recommends to the House of Delegates, that for the more efficient carrying on of the work of organization, the following changes be made in the composition of the respective districts, namely:—

That the counties of New Madrid, Stoddard, Dunklin, and Pemiscot be erected into the 27th Councillor district.

That Jackson county constitute a separate district to be designated the 28th Councillor district.

That the counties of Holt, Atchison and Nodaway comprise a new district to be designated, numerically, the 29th Councillor district.

That the county of Mississippi be attached to the 16th Councillor district.

F. J. LUTZ, Chairman.

On motion the report was received and adopted.

On motion the House adjourned until 5 p. m.

### AFTERNOON SESSION.

The adjourned meeting was called to order by the President at 5:15 p. m.

The Secretary read the resignation of Dr. Wm. F. Kuhn, Councillor for the 14th District.

On motion the resignation was accepted.

The Secretary read the resignation of Dr. Franklin E. Murphy as a delegate from the Jackson County Medical Society.

On motion the resignation was accepted.

The following resolution was introduced by Dr. T. F. Lockwood:  
*Whereas*, We realize the great boon that has come to suffering

humanity in the use of the various antitoxins manufactured today; and,

*Whereas*, The present supply being manufactured and controlled by private firms and individuals with prices fixed, as we believe, too high for the poor and needy of these medical commodities to have full and sufficient access to the same; and,

*Whereas*, Our friend and member of Congress from the Sixth Missouri district, the Hon. David A. DeArmond, having observed the great necessity for a more liberal distribution of these products among those unable to pay the present prices charged for the same, has therefore introduced a bill in Congress to provide for the manufacture and sale by the Government of diphtheritic antitoxine, and to furnish it to the medical profession at a price not exceeding ten per cent. above the cost of production; and,

*Whereas*, The public will be greatly benefitted by such legislation, and the interest of the profession promoted; therefore, be it

*Resolved*, That the Missouri State Medical Association now in session at the capital city of the State, fully endorse the step taken by Mr. DeArmond; and in further token of its approval and appreciation of his efficient work, be it

*Resolved*, That a copy of these resolutions be forwarded to him, apprising him of the co-operation of the medical profession of his own State.

On motion the resolution was adopted.

Dr. W. B. Dorsett introduced the following resolution by request:

It has come to the knowledge of several members of this Association that certain members of this body have made contracts with fraternal bodies to treat members and their families for the sum of \$2.00 per year, or for 16 2-3c per month, and as this is contrary to the spirit of the principles of ethics of this Association and of the American Medical Association, therefore, be it

*Resolved*, That in the interest of the dignity of the medical profession the members of this Association be prohibited from engaging in "Lodge practice" and those at present so engaged be required to withdraw from the same, or from the membership of this body.

C. W. REAGAN,  
A. B. MILLER

Dr. Nicholson moved that the resolution be amended as follows: Resolved, that in the interest of the dignity of the medical profession the members of this Association be discouraged from engaging in "Lodge practice" and those at present so engaged be requested to withdraw from the same.

On motion the resolution as amended was adopted.

Dr. J. R. Lemen introduced some proposed amendments to the constitution which were read by the Secretary.

On motion these proposed amendments were referred to a com-

mittee to be appointed by the President in harmony with the recommendation adopted at the morning session of meeting on the first day.

It was moved that the changes in the By-Laws introduced on the morning of the first day at the suggestion of the President, be adopted. Seconded and carried.

On motion the House adjourned to meet Thursday morning.

### THIRD DAY—Thursday, May 16th, 1907.

#### MORNING SESSION.

The House of delegates was called to order by the President at 8:45.

The Secretary read a telegram of congratulations from the Dakota Medical Association. On motion the Secretary was instructed to send a return telegram of good wishes.

Dr. R. D. Moore, chairman of the Nominating Committee, read the report of that body, as follows:

For Vice Presidents:

First Vice President—Dr. Thos. B. Cook, Rayville.

Second Vice President—Dr. A. H. Vandivert, Bethany.

Third Vice President—Dr. Chas. Hough, Jefferson City.

Fourth Vice President—Dr. A. H. Hamel, De Soto.

Fifth Vice President—Dr. O. F. Pile, Memphis.

For Councillors:

8th District—Dr. L. W. Dallas, Hunnewell.

10th District—Dr. F. G. Nifong, Columbia.

11th District—Dr. R. D. Moore, Central.

12th District—Dr. C. M. Nicholson, St. Louis.

14th District—Dr. F. L. Keith, Flat River (To fill the unexpired term of Dr. Kuhn).

27th District—Dr. D. R. Corbin, Bloomfield.

28th District—Dr. N. P. Wood, Independence.

29th District—Dr. C. L. Evans, Oregon.

For Committee on Public Policy and Legislation:

Dr. C. E. Fulton, Springfield.

Dr. C. H. Dixon, Holliday.

Dr. Geo. W. Wilson, Nevada.

Dr. A. H. Hamel called attention to an error in the report in nominating him for a vice presidency. He said he appreciated the honor the committee had done him but stated that he was constitutionally debarred from filling that office as he was a member of the House of Delegates.

Dr. Hamel moved to amend the report of the committee by substituting the name of Dr. W. B. Dorsett for Councillor of the 11th District for that of Dr. R. D. Moore, and the name of Dr. F. J. Lutz for Councillor of the 12th District for that of Dr. C. M. Nicholson. Seconded and carried.



Dr. F. G. Nifong asked that his name be withdrawn from nomination for the Councillor of the 10th District.

Dr. F. J. Lutz said he appreciated the honor that had been thrust upon him by the vote to re-elect him to the position of Councillor of the 12th District, but asked to be permitted to resign from the position.

Dr. W. B. Dorsett also stated that he fully appreciated the action of the members in renominating him for Councillor of the 11th District, and while he had always regarded it as a privilege to do what he could for the profession and for the Association, he desired to tender his resignation.

The House declined to accept the resignation of either gentleman.

Dr. W. T. Elam moved that the name of Dr. H. E. Pearse be substituted for the name of Dr. C. H. Dixon on the Committee on Public Policy and Legislation.

Dr. Pearse stated that he had been on that committee for some time and begged to resign in favor of some one who could give the necessary amount of time required for the intelligent and successful prosecution of the work which the duties of the office imposed.

Dr. Fulton stated that he would like to have his name withdrawn from the committee as he did not feel warranted in undertaking the duties of this office.

The request of Dr. Fulton was not acted upon by the House and the motion of Dr. Elam to substitute the name of Dr. Pearse for that of Dr. Dixon carried.

The report of the Nominating Committee was then voted upon and adopted as amended.

The Secretary read a telegram announcing the death of Dr. John W. Trader, of Sedalia, one of the ex-presidents (1876).

Dr. Elam moved that the President appoint a committee of five members to draft resolutions on the death of Dr. Trader.

The President appointed the following committee: Drs. J. M. Allen, of Liberty; J. E. Tefft, of Springfield; W. J. Ferguson, of Sedalia; W. G. Moore, of St. Louis; W. T. Elam, of St. Joseph.

The President announced the committee on revision of the Constitution and By-Laws, ordered to be appointed at a previous session, as follows: Drs. W. B. Dorsett, of St. Louis; Jabez N. Jackson, of Kansas City, and F. B. Hiller, of Kahoka.

Dr. Thos. E. Holland, of Hot Springs, addressed the members in behalf of the Southwestern Medical Association. He said that body would hold its next annual meeting at Hot Springs on October 8th and 9th, next, and invited the members of the Missouri State Medical Association to be present.

Attention was directed to the fact that no one had been elected to fill the vacancy for vice president caused by the error in nominating Dr. Hamel.

The name of J. P. Dunigan, of Sullivan, was placed in nomina-

tion and on motion he was elected to fill this vacancy.

Following is a corrected list of officers nominated and elected at this session of the meeting:

For Vice Presidents:

First Vice President—Dr. Thos. B. Cook, Rayville.

Second Vice President—Dr. A. H. Vandivert, Bethany.

Third Vice President, Dr. Chas. Hough, Jefferson City.

Fourth Vice President—Dr. J. P. Dunigan, Holliday.

Fifth Vice President—Dr. O. F. Pile, Memphis.

For Councillors:

8th District—Dr. L. W. Dallas, Hunnewell.

10th District—Dr. Woodson Moss, Columbia.

11th District—Dr. W. B. Dorsett, St. Louis.

12th District—Dr. F. J. Lutz, St. Louis.

14th District—Dr. F. L. Keith, Flat River (To fill the unexpired term of Dr. Kuhn).

27th District—Dr. D. R. Corbin, Bloomfield.

28th District—Dr. N. P. Wood, Independence.

29th District—Dr. C. L. Evans, Oregon.

For Committee on Public Policy and Legislation:

Dr. C. E. Fulton, Springfield.

Dr. H. E. Pearse, Kansas City.

Dr. Geo. W. Wilson, Nevada.

The committee appointed to draft resolutions on the death of Dr. Trader, reported as follows:

The sad intelligence of the death of Dr. John Wesley Trader, of Sedalia, came by wire to the Missouri State Medical Association assembled in convention at Jefferson City, and caused deep regret among his host of friends.

For many years Dr. Trader had been a warm friend and staunch supporter of the State Medical Association and was its president in 1876. He always stood for what was best in the profession; his uprightness and urbanity commanded the esteem of all who knew him. During his busy life he held many responsible and honorable places of trust, always acquitting himself with satisfaction to his friends and credit to himself. He was particularly beloved by the young men in the profession whose earnest and interested friend he ever was. He lost no opportunity to give them advice and extend the helping hand. In the death of Dr. Trader this Association has lost a useful and honorable member.

J. M. ALLEN,

J. E. TEFFT,

W. G. MOORE,

W. T. ELAM,

W. J. FERGUSON,

*The Committee.*

On motion the House adjourned to meet at the call of the President.

## AFTERNOON SESSION.

The House was called to order at 4:20 p. m.

The following report of the Judicial Council was read and on motion was received and adopted:

The Judicial Council desires to report the following actions taken at its last meeting.

Dr. F. J. Lutz was re-elected chairman of the Council and Dr. Goodwin was re-elected secretary of the Council.

For Secretary of the Association Dr. A. W. McAlester, of Kansas City, received the majority of the votes cast and he was declared elected.

Dr. J. Franklin Welch was unanimously elected treasurer.

Dr. E. J. Goodwin was reappointed editor of the Journal.

The Council recommends that the House of Delegates authorize the Council to renumber the councillor districts in such manner that the districts shall appear in numerical order.

Respectfully submitted,

F. J. LUTZ, Chairman.

On motion the report was received and adopted.

It was moved and seconded that the Judicial Council be authorized to renumber the councillor districts as recommended in its report. Carried.

On motion adjourned.

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## MINUTES OF THE JUDICIAL COUNCIL.

## MORNING SESSION.

TUESDAY, MAY 14TH, 1907.

The Judicial Council was called to order at 12:10 p. m., by the chairman, Dr. Lutz.

The following members answered to the roll call:

3rd District.....	J. D. Brummall, Salisbury
4th District.....	C. R. Buren, Princeton
5th District.....	E. H. Miller, Liberty
6th District.....	W. E. McKinley, Denver
7th District.....	W. T. Elam, St. Joseph
8th District.....	L. W. Dallas, Hunnewell
9th District.....	C. W. Reagan, Macon
11th District.....	W. B. Dorsett, St. Louis
12th District.....	F. J. Lutz, St. Louis
13th District.....	B. M. Hypes, St. Louis
14th District.....	Wm. F. Kuhn, Farmington
17th District.....	Frank DeVilbiss, Eugene
18th District.....	G. Ettmueller, Jefferson City



19th District.....	R. D. Haire, Clinton
20th District.....	C. T. Ryland, Lexington
22nd District.....	J. R. Buchanan, Nevada
23rd District.....	A. R. Snyder, Joplin
25th District.....	T. A. Coffelt, Springfield
26th District.....	H. C. Shuttee, West Plains

The Chair appointed the following members an auditing committee to audit the account of the treasurer: Drs. C. T. Ryland, B. M. Hypes, F. DeVilbiss.

On motion adjourned to 3 p. m.

#### AFTERNOON SESSION.

The Council was called to order at 3:40 p. m., Dr. Lutz in the Chair.

The auditing committee appointed to audit the treasurer's account, reported as follows:

We the undersigned auditing have this day examined the treasurer's books and accounts and find them correct.

(Signed) B. M. HYPES,  
FRANK DEVILBISS,  
C. T. RYLAND,

*The Committee.*

Reports from the Councillors of the various districts were called for and the following members reported.

Dr. Brummall, Councillor for the Third District, reported as follows:

In order to prepare the way for the solicitor from the American Medical Association as well as possible, he had written to every physician in his district announcing the plan, and then followed this with another letter when Dr. Roney, the solicitor, was ready to visit the counties. The work in his district had been quite satisfactory. Following is a detailed report of the results:

In Livingston county the membership is the same as it was in 1906. In Linn county the membership has increased by eleven. In Carroll county the membership has increased from 22 to 27. In Chariton county the membership has increased from 22 to 27. The total gain in membership in the district was 29 members. The membership in his district is about 80 per cent. of the total number of physicians in the district. All the societies in the district are doing good work, fairly well organized and stable.

Dr. Buren, Councillor for the 4th District, made the following report:

Putnam county has 18 members, Sullivan county 20 members and Grundy county only 8 members, although the secretary of the latter stated they would have 24 out of a possible 28 members; Mercer county has 9 members. There are 16 physicians in this county who are eligible and they have promised to join but have not yet done so. Putnam county is unfortunately situated for visits; it takes 18 hours by railroad to travel a distance of 20 miles. Mercer county holds two

meetings annually. Grundy has a good society but most of the members are drawn from the city of Trenton.

Dr. McKinley, Councillor for the 6th District, reported as follows:

In the interest of the Sitxh District I visited the medical society of Gentry county on the first Tuesday in June, 1906. I found a very enthusiastic membership; more loyal or harder workers cannot be found than these "faithful ones," Doctors Whitely, Conard, Barger, and Smith. Great credit is due them for their faithfulness. It can be truly said that the deficiency in quantity is made up in quality. Membership, 12; non-members, 12; suspended for non-payment of dues, 9; intelligible, 3; average attendance, 4.

On the 17th of July I visited Harrison County Medical Society at Bethany. I found there about 14 members all doing good work. Their program was excellent. Doctors Geiger and Elam of St. Joseph were present and contributed much to the interest of the program. In this society, as in all county societies, I find usually about four or five who are faithful in attendance, and on whose shoulders depend the success of the society. I visited them again August 16th.

I found in both Gentry and Harrison counties a few members not paying dues to the State Society. This I tried to remedy, asking for a mailing list of the physicians of each county and wrote each one a personal letter, urging them to pay their dues and become members of the State Society, pointing out to them the benefits to be derived from such membership. The membership of Harrison county numbers, 19; number of meetings, 2; non-members, 14; intelligible, 4; physicians retired, 2; average attendance, 8.

On July 28th, 1906, with the kind assistance of Doctors Whitely and Conard of the Gentry County Medical Society of Albany, I organized the DeKalb County Society at Maysville, with five members. Their membership now numbers, 14; non-members, 12; intelligible, 2; meetings, 4; average attendance, 8.

I have not visited them since but hear they are doing good work. Judging from their average attendance, great interest is being manifested.

On August 9th, 1906, we organized the Sixth District Medical Society with twenty members and four honorary members. This society, while not a year old, is not surpassed by any county or district society in the state, either in interest or quality of program.

At Grant City we are doing good work. We have gained two and lost two. At present there are 11 members; non-members, 8; suspended for non-payment of dues, 4; intelligible, 2; retired, 4; meetings, 7; average attendance, 5.

Dr. Elam Councillor for the 7th District reported as follows:

During the year 1906 the Seventh District had a total of 146 members, as against a total of 180 in 1907. A comparative summary of the distribution of this membership by counties is and was as follows:

1906				1907.			
Andrew	4			Andrew	19	gain	15
Atchison	14			Atchison	18	gain	2
Buchanan	73			Buchanan	87	gain	14
Holt	20	loss	2	Holt	18		
Nodaway	35			Nodaway	38	gain	3
	<hr/>				<hr/>		
	146				180		34

Andrew county allowed its membership to drop down to four members in 1906. This being less than a quorum as prescribed by their By-Laws I took it upon myself, after the county had been canvassed under my direction Mr. C. L. Roney, of the American Medical Association, to visit and reorganize this county on March 26th, 1907. Fifteen of the physicians of the county were present and enrolled as members. At the next meeting which I also attended, four additional names were added. Meetings are held on the first Tuesday, March, June, September and December. Number of meetings held, 2; paper read, 1; cases reported, 3; members, 1906, 4; in 1907, 19; increase of 15.

With a little encouragement I hope to see this county take a renewed interest in medical organization. The regular profession have been very much discouraged in this county by the fact that a certain physician continues to practice his profession in the county seat despite the fact that he has been unable, after repeated attempts to obtain his license from the State Board of Health. The prosecutor of this county has offered the excuse as a reason for his inaction, that the medical practice act is defective and the doctor in question cannot be convicted under it, or that the indictments have been improperly drawn.

I have been unable to find it possible to visit Atchison county during one of their meetings. Only two meetings have been held since last May, one for the election of new members and officers and the other to consider a scientific program.

St. Joseph Buchanan county has just passed the most prosperous year of its existence as the following report will show:

Number of regular meetings held during year, 19; number of special meetings, 1; number of scientific papers read, 21; number of subjects for general discussion, 19; number of clinical cases presented, 23; number of symposiums, 8; number of business meetings, 1; number of members last year, 73; number of members at this date, 87, gain, 14; name changed April 24, 1907.

Holt County has been unfortunate in losing two members during the past fiscal year although there has evidently been considerable interest in the scientific work. The report shows:

Number of meetings, 4; papers read and discussed, 8; loss in membership, 2; average attendance, 14.

It has been impossible on account of professional demands for me to visit Holt, although I had every arrangement made to do so at their last meeting, April 4th.

In company with other St. Joseph physicians I visited Nodaway County on March 12th. This county has a good membership and appears to be doing very good work as the following report will show: Number of meetings, 9; number of papers read and discussed, 16; members 1906, 35; 1907, 38; increase of 3.

Dr. Dallas, Councillor for the 8th District, reported as follows:

In general the conditions are fair. There has been no loss of membership and possibly a little gain. In Shelby county the work has been better than usual. In Hannibal (Marion county) the meetings are more frequent than in the past and the attendance is much better than formerly. Ralls county has the best county medical society in the state and more nearly a complete membership of all the eligible physicians than any other county. In July of every year they have an open meeting to which the physicians of surrounding counties are invited.



Dr. Reagan, Councillor for the 9th District, reported as follows:

All the counties have successful working societies. In company with Dr. Bateson, of the American Medical Association, he visited all the counties and personally called upon a great many of the physicians. The results of this work were very satisfactory.

Dr. Dorsétt, Councillor for the 11th District, reported as follows:

St. Louis County has 43 members. During the year they have added 7 members and lost one, a net gain of 6 members. The society is doing better work now than at any previous time and there is very general interest in the meetings. They hold meetings monthly and the attendance is good. They have amended their By-Laws to conform with those of the State Association and now carry but one class of members.

Lincoln County is not doing as good work as it should. Only one meeting was held during the year but they report a membership of 17 at this time.

Pike County has a membership of 19. During the year they held 8 meetings at which 14 papers were presented. The average attendance at the meetings was 10.

St. Charles County does not respond to any efforts to enthuse the physicians into active society work. They make no report for this year.

Dr. Lutz, Councillor for the 12th District, reported as follows:

In St. Louis City the membership has increased steadily and now that society reports 580 members, perhaps one-fourth of the registered physicians in the city. The condition of the profession has never been better. The meetings of the St. Louis Medical Society, which is an old organization, occur religiously every Saturday night (except during July and August) and these are well attended by the members as well as by distinguished members of the profession outside of the city who are frequently invited to be the guests of the Society. The Society has an auditorium of its own. The city also has a medical library composed of about 10,000 volumes. The work of bringing in new members particularly the younger men, has progressed very favorably. The efforts of the St. Louis Medical Society in furthering the work of securing new legislation has been of great assistance. With their larger membership they have been able to do more than other societies and this work has always been in harmony with the work of the State Association.

In Franklin County there are many reasons why the meetings are not more numerously attended. The difficulties are geographical. It is very hilly and is traversed by two railroads and the physicians on either road are apparently as little affiliated as if they lived in separate counties. They are holding meetings however and working along though without any increase of membership.

Dr. Hypes, Councillor for the 13th District, reported as follows:

Ste. Genevieve County is doing splendid work. Although the membership has increased by only one member the membership includes eleven out of a total of sixteen possible members, one or two of whom are too old to engage in active work in the society. Jefferson County is also doing excellent work. Their meetings occur regularly and are well attended and the general condition of the profession well organized and working harmoniously. In Perry County affairs are in rather bad shape. He had been unable to arouse any enthusiasm

among the members in that county. The visit of the solicitor from the American Medical Association had not shown the results which had been anticipated.

Dr. Kuhn, Councillor for the 14th District, reported as follows:

The conditions in this district are peculiar. They have an association called the Southeast Medical Association which to a great extent takes the place of county societies. It is an excellent body and does splendid work. In the separate counties, however, little is done. It is a very hilly country and the difficulty of reaching points of meeting make the holding of meetings a very hard task. He believed, however, that ultimately that portion of the state would become well organized. There are many good men in the counties and these men should be encouraged. St. Francois County is doing splendid work and has a good membership.

Dr. Kuhn asked the Council to accept his resignation as he felt that the conditions were ripe for a man who was more closely aligned with the members to do good work. He himself, not being in active practice, was unable to give the duties the attention which they demanded.

Dr. Devilbiss, Councillor for the 17th District, reported as follows:

He had been appointed only recently and at a time when his duties kept him at Jefferson City almost constantly up to the time of the meeting.

Miller County is well organized and there are few physicians who are not members. They usually hold four meetings during the year all well attended. Moniteau County is well organized though there are a few eligible physicians who are not yet included in the membership. This society is also doing good work. Macon and Camden Counties are organized but he had not had time to become familiar with the conditions in these two counties. Camden County was in a hilly country and there it was difficult to hold meetings regularly.

Dr. Ettmueller, Councillor for the 18th District, reported as follows:

Gasconade, Maries and Osage Counties have been brought into close relation through the building of the Bluff Line railroad and these three counties have joined into one society under the leadership of Dr. Seba. It is in a flourishing condition and doing good work. They have regular meetings which are well attended. In the northern part of Gasconade and Osage Counties he found upon making a personal visit that most of the members preferred to attend the Cole County Medical Society. The physical condition of the country and the railroad connections make it practically impossible for these members to attend the Gasconade-Maries-Osage County meetings and therefore he thought it best not to interfere. So those members in the northern part of the counties named are regular attendants of the Cole County Medical Society. Cole County now has a membership of 29. They hold frequent meetings and are doing good work.

Dr. C. T. Ryland, Councillor for the 20th District, reported as follows:

The work of the solicitor had resulted in the addition of quite a number of new members in Lafayette County. The society is doing good work and holding regular meetings. In Saline County he had

been unable to get the members together for regular work. In Cooper County there has been a slight falling off from membership.

Dr Buchanan, Councillor for the 22nd District, reported as follows:

Bates County holds quarterly meetings. At the last State meeting they reported 15 members. During the year they have taken in 5 new members and have lost 5 members so that they now have the same number as last year. There are 20 physicians in the county who are not members. The fraternal feeling among the physicians is good and the financial condition of the society excellent. The meetings are fairly well attended.

Barton County holds quarterly meetings and reported 21 members at the last State meeting. Five new members were added during the year while 12 were lost, leaving the present membership 14, a net loss of 7. There are 9 physicians in the county who are not members. The fraternal feeling is good and the financial condition of the society very satisfactory.

Vernon County holds monthly meetings, having changed from quarterly, but there is not as much interest manifested in society work as there should be. At the last State meeting they reported 18 members in good standing; during the year they added 8 new members and lost 2, a net gain of 6. Number of physicians in the county not members, 16. Fraternal feeling among the physicians is good and the financial condition of the society satisfactory.

The total number of members in the district in 1906 was 54; in 1907, it is 53, a net loss of 1; total number of physicians in the district not members, 45. An excellent feeling exists among the physicians in the district fostered largely by the John T. Hodgen, District Society.

Dr. Snyder, Councillor for the 23rd District, reported as follows:

In Jasper County there were 14 members last year while this year they have 44 members, an increase of 30. They hold weekly meetings which are well attended and enthusiastic. Newton County has a good working society that meets monthly; the membership is 14. They are doing good work. In McDonald County it is difficult to hold meetings on account of poor railroad facilities and the hilly country makes travel in buggies very irksome. Cedar County has a good working society owing to the efforts of the physicians in Eldorado Springs. Dade County has never been organized but he hoped to report next year a good working organization in this county.

Dr. Johnson, Councillor for the 24th District, though not able to be present at the meeting, sent the following report:

All counties in the district are organized with the exception of Dallas County. The representative of the American Medical Association made a thorough canvas of Dallas County and endeavored to convert the physicians to the organization idea. I cannot report that this was attended with very much success but I shall make other efforts to organize the county during the next year.

Dr. Coffelt, Councillor for the 25th District, reported as follows:

The representative from the American Medical Association had secured the names of a good many physicians who promised to become members. Polk, Christian and Webster had been organized but he had been unable to visit them recently so he could not say just what work they were doing. Polk County was organized with fif-



teen members but the secretary seemed to be somewhat indifferent and had failed to reply to letters. He promised to visit this county soon and make an effort get them into working order. He believed they would soon become a good society. Christian County was organized with 12 members and Webster with 12. The other counties are doing good work. Lawrence-Stone society has a membership of 34, and meet quarterly with an average attendance of 21. There are 8 or 10 eligible physicians still in the territory not members. Barry County has 18 members and sent a delegate to this meeting; Lawrence-Stone also has a delegate at the meeting and Greene County is represented by several members. Greene County had about 30 members when it affiliated something over a year ago and now has 40 members with several applications pending. Good meetings are held weekly and excellent programs are presented. Taney County will probably be organized later in connection with Christian County as there are not enough physicians in Taney to organize an individual society.

Dr. Shuttee, Councillor for the 26th District, reported as follows:

He thought it would not be disputed that he had the worst district in the state. Ozark, Texas and Douglass are practically without railroads and in most of the counties there are few physicians who can be brought into an organization. In Howell County there are four members who live in Oregon County, as there are not enough physicians in Oregon to form a society. The solicitor from the American Medical Association did good work. Dr. Shuttee said he wrote letters to all eligible physicians and the solicitor secured 17 applications for membership from Wright, Douglass and Oregon. He hoped to organize Wright County but saw little prospect of adding other counties just yet. In his home county (Howell) not much work had been done. It seemed difficult to induce the members to prepare papers. From Shannon County he had received no report. Most of the counties were in a rough, hilly district, with few graduates and not enough good men to form societies and maintain working bodies.

Dr. DeVilbiss moved that the Council recommend to the House of Delegates the establishment of a new district to be known as the 27th district, composed of the following counties, namely: Stoddard, Dunklin, Pemiscot and New Madrid. Seconded and carried.

On motion it was recommended that the county of Mississippi be transferred from the 15th district and added to the 16th district.

The Chair stated that some differences existed in the seventh district in that some of the counties in that district desired to be separated and form a new district.

After discussing the subject thoroughly a motion was carried appointing a committee to whom the whole question should be referred for adjustment and report.

It was moved and seconded that Jackson County should be separated from the 21st district and erected into a new district to be known as the 28th district. Carried.

At this point the representatives from the counties of Holt, Atchison and Nodaway were introduced and presented their arguments for a separation from the other counties in the seventh district.

On motion of Dr. Buchanan it was recommended that the coun-

ties of Holt, Atchison and Nodaway be separated from the seventh district and form a new district to be known as the 29th district.

Dr. Shuttee moved that the salary of the editor of the Journal be \$100 per month. Seconded and carried.

On motion adjourned to 8 a. m. on Wednesday.

WEDNESDAY, MAY 15TH, 1907.

The Council was called to order at 8:15 a. m., Dr. W. B. Dorsett, in the chair.

On motion a report of the proceedings of the Council was formulated for presentation to the House of Delegates (See p....)

On motion adjourned.

THURSDAY, MAY 16TH, 1907.

The Council met at 10:45 a. m., Dr. Lutz in the chair.

Dr. Elam moved that the names of the newly elected councillors be inscribed on the minutes of the Council. They are as follows:

Twenty-seventh district, Dr. D. R. Corbin, Bloomfield. Counties: Stoddard, Dunklin, Pemiscot, New Madrid.

Twenty-eighth district, Dr. N. P. Wood, Independence. Counties: Jackson.

Twenty-ninth district, Dr. C. L. Evans, Oregon. Counties: Holt, Atchison, Nodaway.

It was moved that the following order of business be adopted: Election of Chairman of the Council; election of secretary of the Council; election of secretary of the association; election of treasurer of the association; miscellaneous business.

On motion Dr. F. J. Lutz was re-elected chairman.

Dr. E. J. Goodwin was re-elected secretary of the Council.

The names of Drs. Franklin E. Murphy and A. W. McAlester, Jr., were placed in nomination for secretary of the Association. Vote was taken by ballot which resulted in the election of Dr. McAlester.

On motion of Dr. Brummall the secretary cast the ballot for the election of Dr. Welch for treasurer and Dr. Welch was declared duly elected.

Drs. J. F. Fair and D. T. Bailey, of Trenton, Grundy county, petitioned the Council to take some action concerning the expulsion of the two gentlemen from Grundy County Medical Society. After hearing the evidence of the doctors and learning that the action of the Grundy County Medical Society had been taken in 1904 and was in entire harmony with the by-laws of that body, the Council referred the whole question to the Councillor for that district with instructions to report at the meeting of the Council at the next annual session in Springfield, 1908.

The report of the editor was read and received. Dr. Elam moved that the report be spread on the minutes of the Council and published in the Journal. Carried.

## Report of the Editor:

In the twelve issues of the JOURNAL from June 1906 to May 1907 inclusive, 72 original contributions on scientific subjects have been published, and all the business proceedings of the Association transacted at the meeting in 1906. Sixty-two editorials were published and 130 reports from county societies. An analysis of these papers shows that Kansas City members contributed 23.61 per cent. of the original articles; St. Louis 36.11 per cent. and other sections of the state 40.28

An average of six editorials appeared in each issue. shrldluffioG per cent. An average of six editorials appeared in each issue.

I have given special attention to the receipt of books sent out by publishers for review purposes and can report the receipt of 95 volumes. These have been distributed to the medical libraries in the state as follows: To Kansas City Medical Library 48 books, to the St. Louis Medical Library 47 books. Reviews of most of these works have been published. A tabulated record of these books is on file in my office.

Copies of the JOURNAL have been mailed each month to medical libraries throughout the county and in Canada, and in exchange for other state medical journals and the more important so-called independent medical journals, including several foreign journals, totaling 255.

The only expense attaching to the office aside from the salary allowed, is \$13.58 for postage on 679 letters.

Carbon copies of these letters are on file in the office.

Respectfully submitted,

E. J. GOODWIN, Editor.

Dr. DeVilbiss moved that the chair appoint a committee of which the chairman shall be a member, to select a publishing committee for the next year. Carried.

The Chair appointed Drs. DeVilbiss and Buchanan.

It was moved that the Council concur in the action of this committee. Carried.

A motion was made and carried that the Council recommend to the House of Delegates that the councillor districts be renumbered in numerical order and ask authority of the House to permit the Council to carry out this suggestion.

On motion the present executive committee was continued.

On motion Dr. Goodwin was reappointed editor of the JOURNAL.

On motion adjourned.



## GENERAL SESSION.

SECOND DAY—Wednesday, May 15th, 1907.

## EVENING SESSION.

The session was called to order at 8:15 p. m. by the President, Dr. Wallace.

The first address was delivered by Governor Folk, who was followed by Dr. W. B. Outten, St. Louis.

Fifteen of the ex-presidents of the Missouri State Medical Association were present, each making a brief address, as follows: Dr. J. E. Tefft, Springfield; Dr. E. W. Schauffler, Kansas City; Dr. J. M. Allen, Liberty; Dr. Frank J. Lutz, St. Louis; Dr. A. W. McAlester, Columbia; Dr. L. I. Mathews, Carthage; Dr. C. Lester Hall, Kansas City; Dr. J. H. Duncan, St. Louis; Dr. Jacob Geiger, St. Joseph; Dr. Walter B. Dorsett, St. Louis; Dr. U. S. Wright, Fayette; Dr. J. D. Griffith, Kansas City; Dr. W. G. Moore, St. Louis; Dr. Jabez N. Jackson, Kansas City; Dr. D. C. Gore, Marshall.

THIRD DAY—Thursday, May 16th, 1907.

## MORNING SESSION.

The general session was called to order at 10 a. m., the president in the chair. The first order of business was the election of a president.

On the first informal ballot Dr. W. S. Allee was nominated.

On motion of Dr. Vandivert, Bethany, the informal ballot was made formal.

On motion the vote was made unanimous.

On motion of Dr. W. T. Elam, the president appointed a committee of three to escort the newly elected president to the chair, the following gentlemen being appointed for that duty: Dr. C. Lester Hall, Dr. W. G. Moore and Dr. Jabez N. Jackson.

The next order of business being the selection of a place of meeting in 1908, Dr. Fulton, of Springfield, extended an invitation to the Association to meet at that place. Seconded by Dr. DeVilbiss.

On motion Springfield was named as the next place of meeting.

## AFTERNOON SESSION.

The general session was called to order by the President at 4:15 p. m.

The election of orators on medicine and surgery for the next annual meeting being in order, Dr. John H. Duncan, of St. Louis, was nominated to deliver the oration on medicine.

On motion the Secretary was instructed to cast the ballot of the Association for the election of Dr. Duncan, which he did and Dr. Duncan was declared duly elected.

On motion Dr. Herman E. Pearse, of Kansas City, was unanimously elected to deliver the oration on surgery.

On motion adjourned.

## MEDICAL SECTION.

J. H. P. BAKER, M. D., Chairman      H. A. McDONALD, M. D., Sec.  
 SECOND DAY—Wednesday, May 15th, 1907.

## MORNING SESSION.

The Medical Section was called to order at 9:30 a. m., by Dr. Wallace. In the absence of Dr. Baker, the chairman, Dr. E. H. Miller, of Liberty, was elected to fill the vacancy.

The following papers were read and discussed:

"Some Forms of Scabies Seen in Private Practice," by William Frick, M. D., of Kansas City.

Discussion by Doctors John Duncan, St. Louis; J. P. Kanoky, Kansas City; Dr. Frick closing.

"Autointoxication," by James Hanks, M. D., of Brashear.

Discussion by Doctors J. M. Allen, Liberty; B. H. Zwart, Kansas City; J. R. Buchanan, Nevada; A. H. Vandivert, Bethany; J. B. Norman, California; P. C. Scholz, St. Louis; C. W. Reagan, Macon; Dr. Hanks in closing.

"Blood Pressure and Its Relation to Disease," by Dr. F. W. Froehling, M. D., Kansas City.

Discussion by Doctors J. R. Lemen, St. Louis; B. H. Zwart, Kansas City; J. M. Allen, Liberty; J. P. Kanoky, Kansas City; Robert Sloan, Kansas City; Dr. Froehling, in conclusion.

"Treatment of Pneumonia," by O. H. Brown, M. D., St. Louis.

Discussion by Doctors H. B. Cole, Sedalia; R. T. Sloan, Kansas City; W. G. Moore, St. Louis; E. H. Miller, Liberty; P. C. Scholz, St. Louis.

## AFTERNOON SESSION.

The session was called to order by the chairman, Dr. Baker, at 1:45 p. m.

The following papers were read and discussed:

"Posture in Labor," by W. B. Deffenbaugh, M. D., St. Joseph.

Discussion by Dr. A. H. Vandivert, Bethany.

## SYMPOSIUM ON TUBERCULOSIS.

Dr. William Porter in the Chair.

"Tuberculosis a Communicable Disease," by J. M. Allen, M. D., Liberty.

"Sanitation and Tuberculosis," by Geo. Homan, M. D., St. Louis.

"Early Diagnosis of Tuberculosis," by Louis M. Warfield, M. D., St. Louis.

"Duty of the Practitioner in Tuberculosis," by W. S. Allee, M. D., Olean.

"Consumption and Civilization," by R. O. Cross, M. D., Kansas City.

"Local Medical Organization," by Frank DeVilbiss, M. D., Eugene.

"Civic Responsibilities," by William Porter, M. D., St. Louis.

Discussion by Drs. H. B. Cole, Sedalia; A. H. Vandivert, Bethany; J. B. Norman, California; O. H. Brown, St. Louis; W. E. McKinley, Denver; E. W. Shauffler, Kansas City.

"The Differential Diagnosis Between Chorea Minor and Tic," by Dr. William W. Graves, M. D., St. Louis.

Discussion by Dr. Wm. Engelbach, St. Louis and Dr. John Punton, Kansas City.

Dr. R. O. Cross, presented the following motion:

That the chairman of the Medical Section appoint a committee of five members to abstract, edit, publish and circulate such matter as pertains to prevention of tuberculosis in papers read in the symposium on tuberculosis; also requesting each component county medical society to donate money for this purpose to be prorated according to the number of members. This literature to be signed only by the Missouri State Medical Association. Seconded and carried.

Pursuant to the above motion the chair appointed the following gentlemen on the committee:

Wm. Porter, M. D., St. Louis; Geo. Homan, M. D., St. Louis; J. M. Allen, M. D., Liberty; W. T. Lindley, M. D., Hamilton.

On motion adjourned to Thursday morning

### THIRD DAY—Thursday, May 16th, 1907.

#### MORNING SESSION.

The section was called to order at 10:30 by the chairman, Dr. Baker, of Salisbury.

The following papers were read and discussed:

"The Eye and the Nervous System," by H. E. Derwent, M. D. of Clinton.

Discussion by Drs. A. H. Vandivert, Bethany; T. A. Coffelt, Springfield; Dr. Derwent in conclusion.

"A Plea for the Cross-Eyed Child," by John Green, Jr., M. D., of St. Louis.

Discussion by Drs. Llewellyn Williamson, St. Louis; T. A. Coffelt, Springfield; P. C. Scholz, St. Louis, and Dr. Green in conclusion.

"A Plea for the State Care of Nervous Invalids," by John Punton, M. D., Kansas City.

Discussion by Drs. W. W. Graves, St. Louis; C. B. Hardin, of Kansas City; D. S. Booth, St. Louis; Robertson, Kansas City; Whittington, Marshall; and Dr. Punton in conclusion.

On motion adjourned until 1:30 p. m.



## AFTERNOON SESSION.

In the absence of the chairman of the section Dr. Adcock was elected temporary chairman and the meeting called to order at 1:50 p. m.

The following papers were then read and discussed:

"What We Have and What We Should Have of Medical Law Governing the Practice of Medicine," by C. B. Hardin, M. D., Kansas City.

Moved that in view of the lateness of the hour the paper be turned over to the publication committee without discussion. Seconded and carried.

"The Attitude of the Public Toward the Doctor," by H. S. Crawford, M. D., Harrisonville.

Moved by Dr. Punton that in view of the importance of such papers as Dr. Hardin's<sup>2</sup> and Dr. Crawford's, they be discussed and that such papers as could not be reached that afternoon be given first place in the matter of publication in the JOURNAL. Seconded and carried.

Discussion of both papers by Dr. John Punton, Kansas City; Frank DeVilbiss, Eugene; B. H. Zwart, Kansas City; T. L. Bradley, Warrensburg; R. O. Crawford, Eldorado Springs; Wm. Frick, Kansas City; J. L. Anderson, Warrensburg; H. M. Lyle, Kansas City, and Drs. Hardin and Crawford in conclusion.

"Medical Scraps," by T. F. Lockwood, M. D., Butler.

No discussion.

It was moved that all papers on the program which had not been read should be read by title and referred to the committee for publication.

Officers of the medical section for the year 1907-1908 were elected as follows: Chairman, T. F. Lockwood, M. D., Butler; vice chairman, W. G. Cowan, M. D., Sedalia; secretary, Gail Allee, M. D., Lamar.

On motion the section adjourned *sine die*.

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SURGICAL SECTION.

WARREN B. OUTTEN, M. D. Chairman. GAIL ALLEE, M. D., Secretary.

SECOND DAY—Wednesday, May 15th, 1907.

## MORNING SESSION.

Dr. C. E. Fulton read a paper on "The Surgical Treatment of Enlarged Prostate," and Dr. C. F. Roberts a paper on "A Few Points Relative to Prostatectomy." On motion, these two papers were discussed together, the following taking part in the discussion: Drs. Griffith, of Kansas City; Campbell, of St. Joseph; Elam, of St.

Joseph, Guyot, of Jefferson City; Geiger, of St. Joseph; Tupper, of St. Louis; Wallace, of St. Joseph; Pearse, of Kansas City, and Myer of Columbia.

Dr. R. D. Haire read a paper on "Local Anesthesia," which was discussed by Drs. Seelig, of St. Louis; Geiger, of St. Joseph; Coffey, of Kansas City; McGill, of St. Joseph, Griffith, of Kansas City; Hall, of Kansas City, and John Green, Jr., of St. Louis.

Dr. J. N. Scott read a paper on "Present Status of X-Ray Treatment of Malignant Growths," which was discussed by Drs. Crockett, of Kansas City; McGill, of St. Joseph, McBride, of Kansas City; Pearse, of Kansas City; Suddarth of Smithville, and Brosius, of Gallatin.

#### AFTERNOON SESSION.

Dr. W. B. Dorsett read a paper on "Cystic Degeneration of the Ovary as a Cause of Dysmenorrhea," which was discussed by Drs. C. Lester Hall, of Kansas City; Marsh, of Tipton; Griffith, of Kansas City; Elam, of St. Joseph; Robinson, of Kansas City, and Pearse, of Kansas City.

Dr. James Moores Ball read a paper on "The Surgical Treatment of Glaucoma," which was discussed by Drs. John Green Jr., and Dr. Williamson, both of St. Louis.

Dr. Herman E. Pearse read a paper on "Report of a Case of Aneurysm of the Subclavian: Ligature in the First Portion; Recovery." This paper was discussed by Drs. Guyot, of Jefferson City, and Dalton, of St. Louis.

Dr. H. C. Dalton read a paper on "The Treatment of Tubercular Peritonitis, with Report of a Case," which was discussed by Drs. Griffith, of Kansas City; Cordier, of Kansas City; Campbell, of St. Joseph; Marsh, of Tipton; Jackson, of Kansas City; Wallace, of St. Joseph, and Keiffer, of St. Louis.

Dr. W. H. Coffey read a paper on "Congenital Malformation of the Rectum; Report of a Case." This paper was discussed by Drs. Stauffer, of St. Louis; Thrailkill, of Kansas City; Hinchey, of St. Louis; Marsh, of Tipton, and Coffey, of Kansas City.

Dr. W. J. McGill read a paper on "Stricture of the Rectum," which was discussed by Dr. Thrailkill, of Kansas City.

Dr. Francis Reder read a paper on "Malignant Diseases of the Rectum," which was discussed by Drs. Marsh, of Tipton; Coffey, of Kansas City, Thrailkill, of Kansas City; Stauffer, of St. Louis, and McGill, of St. Joseph.

#### THIRD DAY—Thursday, May 16th, 1907.

##### MORNING SESSION.

Dr. W. U. Kennedy read a paper on "Cholecystectomy vs. Cholecystostomy," which was discussed by Drs. Pearse, of Kansas City, and Kennedy, of St. Louis.

Dr. T. E. Potter read a paper on "The Omentum as a Surgical Factor," which was discussed by Dr. Tupper and Dr. Reder, both of St. Louis.

Dr. Willard Bartlett read a paper on "Personal Experiences in the Removal of Ureteral Calculi," which was discussed by Drs. Meisenbach and Seelig, both of St. Louis.

#### AFTERNOON SESSION.

The chairman being absent, Dr. Pearse, of Kansas City was elected temporary chairman.

Dr. R. D. Carman, of St. Louis, read a paper on "The Value of the Roentgen Rays in the Diagnosis of Renal and Ureteral Calculi," which was discussed by Drs. Bartlett, of St. Louis, and Pearse, of Kansas City.

Dr. Louis T. Riesmeyer read a paper on "The Effect of Surgical Operation on Diabetic Patients."

Dr. Robert Barclay read a paper on "Relief of Obstinate Deafness of Chronic Middle Ear Disease," which was discussed by Dr. Logan, of Kansas City.

The following officers of the Surgical Section were elected for the year 1907-1908:

Chairman, Dr. Herman E. Pearse, Kansas City; vice-chairman, Dr. Howard Hill, Kansas City; secretary, Dr. Paul Y. Tupper, St. Louis.

On motion adjourned.

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Following is a list of members in attendance at the Fiftieth Annual Meeting:

Adcock, J. A. B. Warrensburg.	Barek, C., St. Louis.
Anthony, F. R., Maryville.	Barnhart, D. A., Huntsville.
Allen, J. M., Liberty.	Bell, W. E., Osceola.
Allee, W. S., Olean.	Beaty, J. G., Clinton.
Allee, E. M., California.	Bedford S. V., Jefferson City.
Austin, M. B., Brunswick.	Booth, D. S., St. Louis.
Austin, Nettie, Hannibal.	Bramel, H. W., McGuirk.
Albers, Edwin A., Smithton.	Bryan, E. M., Fulton.
Allee, W. L., Eldon.	Bragg, G. G., Huntsville.
Anderson, J. T., Warrensburg.	Brown, O. H., St. Louis.
Allee, G. D., Lamar.	Bohling, C., Sedalia.
Ball, O. F., St. Louis.	Brosius, W. L., Gallatin.
Ball, Otto H., St. Louis.	Bradley, T. L., Warrensburg.
Ball, James Moore, St. Louis.	Bowles, S. A., Westphalia.
Baysinger, S. L., Rolla.	Blakesley, T. S., Kansas City.
Barney, Reuben, Chillicothe.	Bartlett, Willard, St. Louis.
Baird, Jesse P., Marionville.	Bennet, E. C., Bolckow.
Baker, W. R., St. Louis.	Burke, John P., California.
Baker, J. H. P., Salisbury.	Bailey, D. T., Trenton.



- Broyles, F. H. Bethany.  
Buchanan J. Robert, Nevada.  
Braecklein, W. A., Higginsville.  
Brummall, J. D., Salisbury.  
Brown, H. G., Bosworth.  
Brown, S. M., Monroe City.  
Brown, Tinsley, Hamilton.  
Breuer, W. H., St. Louis.  
Bonham, V. Q., New Franklin.  
Boulware T. C., Butler.  
Callison, E. C., Kirksville.  
Callaway, L. H., Nevada.  
Carman, R. D., St. Louis.  
Chastain, E. N., Butler.  
Cook, T. B., Rayville.  
Cole, H. B., Sedalia.  
Coffey, W. H., Kansas City.  
Campbell, O. B., St. Joseph.  
Coffelt, Theo. A., Springfield.  
Corbin, D. R., Bloomfield.  
Cowan, J. E., Sedalia.  
Cordier, A. H., Kansas City.  
Chapman, A. W., Charleston.  
Crawford, R. O., Eldorado Spgs.  
Crawford, H. T., Harrisonville.  
Craig, L. Bell, Nevada.  
Cross, Robt. O., Kansas City.  
Crowson, E. L., Pickering.  
Curl, A. C., Cross Timbers.  
Clark, W. A., Jefferson City.  
Crum, J. A., Marion.  
Dallas, Dudley P., Hunnewell.  
Dallas, L. W., Hunnewell.  
Dalton, H. C., St. Louis.  
Davis, S. O., Warsaw.  
Davis, J. R., Callaway.  
Dawson, Frank L., Elsberry.  
Dawson, J. W., Eldorado Spgs.  
Dean, L. E., Maryville.  
Dearing, W. A., Jamestown.  
DeVilbiss, Frank, Eugene.  
Deffenbaugh, W. D., St. Joseph.  
Dillon, Marion, Fairfield.  
Dixon, C. H., Holliday.  
Dorsett, Walter B., St. Louis.  
Dorsett, E. Lee, St. Louis.  
Derwent, A. E., Clinton.  
Downing, T. J., New London.  
Dowell H. S., Clearmont.  
Duckett, F. H., Milford.  
Duncan, J. H., St. Louis.  
Dunegan, Jas. P., Sullivan.  
Eaton, J. L., Bismarck.  
Elliott, W. H., Bunceton.  
Elam, W. T., St. Joseph.  
Enloe, Cortez, F., Jefferson City.  
Engelbach, William, St. Louis.  
Epperly, R. G., Prairie Hill.  
Ettmueller, G., Jefferson City.  
Evans, R. A., Amity.  
Evans, E. E., Fulton.  
Evans, C. L., Oregon.  
Fair, J. F., Trenton.  
Fassett, Chas. Wood, St. Joseph.  
Ferguson, A. D., Callaway.  
Ferguson, W. J., Sedalia.  
Foster, T. W., Butler.  
Franklin, J. A., Cameron.  
Freundenberger, H. C., Charles-  
burg.  
Froehling, F. W., Kansas City.  
Frick, William, Kansas City.  
Fulton, A. L., Kansas City.  
Fulton, C. E., Springfield.  
Fleming, A. W., St. Louis.  
French, Pinckney, St. Louis.  
Fisher, J. M., Columbia.  
Gaines, E. F., Bates City.  
Gathright, J. B., Appleton City.  
Geiger, Jacob, St. Joseph.  
Gehrunge, Eugene C., St. Louis.  
Guyot, J. DeVoine, Jefferson City  
Gilmore, E. E., Adrian.  
Gibbins, W. H., Clinton.  
Goodwin, E. J., St. Louis.  
Goodier, Robert H., Hannibal.  
Gosney, C. W., Kansas City.  
Gore, A. E., Marshall.  
Gore, D. C., Marshall.  
Graves, W. M., St. Louis.  
Greeson, G. A., Lincoln.  
Gray, Lashley M., California.  
Griffin, J. Morse, Excelsior Spgs.  
Griffith, J. D., Kansas City.  
Green, John Jr., St. Louis.  
Gunn, J. A., Versailles.  
Gashwiler, J. Schooling, Nov-  
inger.  
Hamilton, R. L., Richmond.  
Hanks, James, Brashear.  
Harris, Jas. A., Mt. Vernon.  
Haney, T. L., Flat River.  
Hall, Frank J., Kansas City.  
Hardin, Chas. B., Kansas City.  
Hampton, J. R., Clinton.  
Hamel, A. H., De Soto.  
Harrison, J. T., Fulton.  
Haire, Robert D., Clinton.  
Hatter, W. L., Barnett.  
Hall, C. Lester Kansas City.

- Head, C. W., Windsor.  
Heddens, Jas. W., St. Joseph.  
Herbert, T. B., Lebanon.  
Hill, Howard, Kansas City.  
Hill, Jas. A., Jefferson City.  
Hill, Kimball, Eldorado Springs.  
Hill, R. B., Eldorado Springs.  
Hill, Roland, St. Louis.  
Hiller, Frank B., Kahoka.  
Hinchey, Frank, St. Louis.  
Hickman, S. P., Ulman.  
Holmes, A. T., Jerico Springs.  
Homan, George, St. Louis.  
Hough, Chas. P., Jefferson City.  
Howard, T. A., Slater.  
Hypes, B. M., St. Louis.  
Jackson, Jabez N., Kansas City.  
Jackson, C. M., Columbia.  
James, R. M., Joplin.  
Jones, J. E., Hillsboro.  
Jones, W. G., Lincoln.  
Kanoky, J. Philip, Kansas City.  
Keith, F. L., Flat River.  
Kennedy, W. U., St. Louis.  
Kelley, Sam G., Sedalia.  
Kieffer, A. R., St. Louis.  
Kintord, J. R., Raymond.  
Kerschel, O. F., St. Louis.  
Kouns, D. H., Tuscumbia.  
Kuhn, W. F., Farmington.  
Lopp, J. E., Jefferson City.  
Latham, H. W., Latham.  
Lang, J. G., Centertown.  
Leach, H. T., Elston.  
Lemen, J. R., St. Louis.  
Lockwood, W. A., Conway.  
Logan, James E., Kansas City.  
Long, A. C., Denver.  
Lyle, Halsey M., Kansas City.  
Landis, H. B., King City.  
Leonard, P. I., St. Joseph.  
Lindley, W. L., Hamilton.  
Lockwood, T. A., Butler.  
Lastain, W., Jefferson City.  
Lutz, F. J., St. Louis.  
Loeb, Hanau W., St. Louis.  
McAlester, A. W., Columbia.  
McAlester, A. W., Jr., Kansas City.  
McConnell, C. T., Sedalia.  
McConnell, G., St. Louis.  
McComb, J. A., Lebanon.  
McComas, A. R., Sturgeon.  
McCandless, W. A., St. Louis.  
McBride, W. S., Kansas City.  
McDonald, H. A., Pisgah.  
McEwen, Oliver, Shannondale.  
McGill, W. J., St. Joseph.  
McGuire, M. S., Arrow Rock.  
McNutt, W. B. A., Monroe City.  
McLemore, T., Vernon.  
McKinley, W. E., Grant City.  
Manning, D. F., Marshall.  
Marsh, J. W., Tipton.  
Martin, J. B., Russellville.  
Mann, F. W., Wellington.  
Matthews, J. C., Springfield.  
Matthews, L. I., Joplin.  
Meisenbach, A. H., St. Louis.  
Meyer, L. A. T., Wardsville.  
Miller, E. H., Liberty.  
Millson, G. A., Nevada.  
Millican, K. W., St. Louis.  
Moore, Roy D., Central.  
Moore, Geo. M., Linn Creek.  
Moore, J. W., St. Louis.  
Moore, J. G., Fulton.  
Moore, W. G., St. Louis.  
Miller, W. McN., Columbia.  
Morfit, J. C., St. Louis.  
Mosby, C. V., St. Louis.  
Morrow, W. F., Kansas City.  
Murray, L. F., Holden.  
Murphy, Franklin E., Kansas City.  
Myer, Max W., Columbia.  
Morris, C. C., St. Louis.  
Neff, Robert L., Joplin.  
Neville, E. J., St. Louis.  
Nichols, C. B., Mokane.  
Nicholson, C. M., St. Louis.  
Nichols, H. T., Ashland.  
Norman, J. B., California.  
Nifong, Frank G., Columbia.  
Norwood, W. W., Russellville.  
Noyes, Guy L., Columbia.  
Nurland, J. H., St. Louis.  
Orr, Chas. J., St. Louis.  
Osborne, H. T., Neosho.  
Oутten, W. B., St. Louis.  
Parrish, J. S., Pleasant Green.  
Patterson, W. R., Tipton.  
Pearse, Herman E., Kansas City.  
Pile, O. F., Memphis.  
Pipkin, W. D., Macon.  
Platter, A. E., Memphis.  
Porterfield, E. P., St. Louis.  
Potter, Peter, St. Louis.  
Potts, Jerome D., St. Louis.  
Potter, T. E., St. Joseph.

Prentiss, H. S., Pleasant Hill.	Sloan, R. T., Kansas City.
Punton, John, Kansas City.	Seeling, M. G., St. Louis.
Poague, Samuel A., Clinton.	Stratton, C. D., Rothville.
Porter, William, St. Louis.	Thorpe, J. L., Jefferson City.
Prewett, Geo. E., Hawkpoint.	Todd, S. B., Richards.
Reid, H. L., Charleston.	Thompson, W. S., Armstrong.
Rogers, J. C., Kansas City.	Tupper, Paul Y., St. Louis.
Rodes, E. L., Lincoln.	Tefft, J. E., Springfield.
Ragsdale, T. J., Lee's Summit.	Tatum, Harry E., Brunswick.
Robinson, G. Wile, Kansas City.	Tiffany, Flavel B., Kansas City.
Royl, J. E., Aullville.	Thorpe, A. V., Jamestown.
Robinson, E. F., Kansas City.	Thraillkill, E. H., Kansas City.
Rodes, W. R., Mexico.	Tureman, Herbert G., Kansas City.
Roberts, C. T., Kansas City.	Van Hoefer, S. A., St. Louis.
Reder, F., St. Louis.	Van Ravenswaay, C. H., Boonville.
Reagon, C. W., Macon.	Vineyard, G. W., Jackson.
Redman, Spence, Platte City.	Vandivert, A. H., Bethany.
Riesmeyer, Louis T., St. Louis.	Wright, U. S., Fayette.
Ryland, C. T., Lexington.	Williamson, Llewellyn, St. Louis.
Schofield, L. J., Warrensburg.	Wallace, Chas. H., St. Joseph.
Son, E. R., Osage City.	Winn, R. M., Glasgow.
Sweeney, Chas. T., Chilhowee.	Wallis, J. R., Clinton.
Shy, M. P., Knobnoster.	Warfield, Louis M., St. Louis.
Suddarth, C. H., Smithville.	Wood, E. A., Sedalia.
Sampson, J. H., St. Joseph.	Williams, J. H., Bates.
Sayler, H. L., Elmo.	Wood, N. P., Independence.
Scott, J. N., Kansas City.	Williams, D. B., Osceola.
Shautland, W. M., Clinton.	Williams, V. O., Nevada.
Sheetz, Robert, Orrick.	Williamson, D. H., Wainwright.
Stauffer, W. H., St. Louis.	West, W. M., Monett.
Stewart, James, St. Louis.	Welch, J. Franklin, Salisbury.
Shelton, M. C., Joplin.	Wallace, J. S., Brunswick.
Schauffler, Edward W., Jackson.	Walters, F. E., Bowling Green.
Schlueter, Robert E., St. Louis.	Wood, A. M., Lentner.
Shuttee, H. C., West Plains.	Williams, P. E., Fulton.
Snyder, A. R., Joplin.	Woodson, C. R., St. Joseph.
Spotts, B. M., Marshall.	Young, E. F., Sedalia.
Scholz, Paul C., St. Louis.	Zwart, B. H., Kansas City.
Stone, A. B., Barton.	Total 334.
Sneed, C. M., Jefferson City.	
Stewart, E. L., Kansas City.	

## REPORT OF THE CHAIRMAN OF THE JUDICIAL COUNCIL.

I desire to call attention to some of the most important actions which have been taken during the year on the part of the Council representing the organized profession of the state, and to congratulate you upon the successful accomplishment of many of the things undertaken.

When the Chairman of the Committee on Legislation of the American Medical Association requested assistance from the State of Missouri, the councillors responded promptly to the request of your



Chairman and urged Congress to pass the Army Medical Bill and Pure Food Law. You are familiar with the provisions of both of these enactments; the one elevating the status of the medical men in the army, the other protecting the people of this country against the sale, on the part of the unscrupulous, of adulterated and injurious food and drugs. In both instances, I venture to say, this Association exerted a beneficent influence.

During this year the American Medical Association, through its proper officers, conferred with the Executive Committee of this Council concerning the systematic canvass for organization work throughout the state. Your Chairman had urged this plan of canvassing individuals at the St. Louis meeting three years ago as a substitute for the Journal of the State Association. At that time the wisdom of the Association determined upon the journal as a means for calling to the attention of the profession the benefits of as well as the necessity for thorough organization.

The organization work of the journal has been supplemented by the canvassing, to which I have called your attention, and which the Executive Committee initiated under the supervision of the Councillors; each one of whom will, no doubt, be prepared today to present the results of this canvass in his respective district; and the secretary will make a detailed report of the total result of this canvass.

The Executive Committee asks your approval of the arrangements which have been made for the payment of the canvassers and for the dues of the members acquired by the canvassers according to which their payment at the time they entered the Association will carry them until the year 1908. These arrangements are represented by the following resolutions:

Resolved: That to defray the expenses of the canvasser, the Executive Committee recommends that the Association set aside out of the membership dues of every new member secured by the representatives of the American Medical Association the sum of one dollar, which sum shall be paid to the representative securing the new member.

Resolved: That all county medical societies in affiliation with the State Medical Association be requested to accept the dues paid by new members coming in at this time as payment for all dues up to January 1, 1908, and that the publishing committee be instructed to send the Journal of the Missouri State Medical Association to all such new members from the date of their admission to the county society to January, 1908.

Resolved: That the canvassers for the American Medical Association be authorized to collect from each new applicant for membership the dues for one year for both the county society and the State Medical Association, which payment of dues shall entitle the applicant, upon his election, to membership in the county society and in

the State Medical Association until January 1, 1908. The money so collected by the canvasser shall at once be transferred by him to the secretary of the county society who shall in each instance, immediately transmit the same to the state secretary.

Much remains, however, to be done in regard to gathering our professional brethren into local societies. Many of the county societies exist on paper only; in others, the membership has been fluctuating and still others have gone out of existence. Whilst this is much to be regretted, it is not entirely discouraging because in the very nature of things the enthusiasm of the profession cannot be expected to be continuous and the first enthusiastic efforts will eventually result in permanent membership and in steady growth. One of the factors which will contribute to this will be more systematic and persistent work on the part of the councillors. To facilitate this same changes should be made in the geographic distribution of some councillor districts.

In some parts of the state requests have been made for the redistribution of the councillor districts, evidently based upon the experience of the county societies.

The proposed change in the councillor districts will necessitate an alteration in the Constitution and By-laws, for the present number of councillors is not in conformity with the letter of the organic law of this Association; the number of councillors having been increased without being authorized by the law. This, however, is not a matter of serious importance.

The organization of the profession and the best manner of accomplishing it with least expense to the Association, was uppermost in the minds of the Council and the House of Delegates when these Councillor districts were created, and in this new work of organizing the profession many changes had necessarily to be made on account of the accessibility of different counties and on account of the willingness to do work on the part of those entrusted with the organization.

The Council has lost during the year one of its most efficient members, Dr. W. S. Allee, who resigned his post; and after proper consultation with the President of the State Association, Dr. Frank Devilbiss was appointed in his stead, an action in which we ask the concurrence of the House of Delegates.

The resignation of Dr. J. E. Tefft as councillor of the 25th district was accepted by the executive committee and Dr. T. A. Coffelt of Springfield was elected to fill the vacancy.

There has also occurred during the year a vacancy in the Chairmanship of the surgical section of the Association by the removal from this state of Dr. Witherspoon, who was elected at the last meeting of the Association, and on the nomination of the President, in the absence of provision in the by-laws for filling vacancies, the Executive Committee appointed Dr. W. B. Outten, of St. Louis, to the position.

I wish also to submit as per your instructions, the contract into which this Association has entered for the publication of your journal for the next three years.

Respectfully submitted,

F. J. Lutz, Chairman.

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## REPORT OF THE COMMITTEE ON PUBLIC POLICY AND LEGISLATION.

Your Committee on Public Policy and Legislation begs leave to submit the following report:

For the accomplishment of the work which was assigned to it by the resolutions adopted at the Jefferson City meeting of last year, your committee requested a conference of representatives of the various county societies which had been appointed in pursuance to a resolution printed on page 36 of the July number of the Journal of the Missouri State Medical Association. To this conference were submitted various propositions upon which your committee had received instructions from the Association. A general discussion of the needs of the legislation thought desirable was precipitated and much valuable information elicited and your committee was familiarized with the views and wants of the profession throughout the state.

We wish to return to the county societies and to their representatives upon the auxiliary committee our grateful acknowledgment for the important aid which they gave to your committee.

The most important enactment which it is the privilege of your committee to report and which makes for the uplifting of our profession more than anything which has been done for many years and which places us abreast of our sister states in questions appertaining to the qualifications of practitioners of medicine, is that concerning which your committee was instructed after the presentation of the very thorough and comprehensive report on medical education presented by Dr. Woodson Moss at the last meeting. As you are aware, the Medical Practice act recently passed by the General Assembly is in conformity with the minimum requirements as presented by the committee on education of the American Medical Association in so far as they could be made applicable to the state of Missouri. Heretofore convictions for practising medicine without a license have been extremely difficult if not impossible. Under the amended sections of the Practice Act it is hoped that unlicensed practitioners can be more readily brought under the direction of the law; and those whose licenses may have been revoked cannot continue the practice of our profession in violation of the law and in contempt of those who have complied with all legal requirements.

For the protection of the people of this state as well as for the protection of the medical profession, the first step in advancement



must be the uplifting of the members of our own profession. Competition with all irregulars, with the representatives of morbid schemes and the honorable competition and rivalry of qualified men will be made more easy if those who enter the profession attained the highest degree of proficiency obtainable in the environments furnished by our own state. Your committee is of this opinion and has acted from this view point when urging the enactment of legislation concerning higher medical education.

It has also been the privilege of your committee and of the organized profession to lend substantial aid to the humanitarian and philanthropic organization which presented to the legislators the measures concerning the sale of foods and drugs in conformity with the national law recently passed by Congress. Next to the Medical Practice Act, this measure is of the greatest importance to the medical profession and to the people of this state, for it safeguards, so far as legislation can do this, against the use of adulterated drugs and foods and will be an important adjuvant in limiting the use of nostrums and preparations which have been placed upon the market as substitutes for pharmaceutical preparations.

The next measure concerning which you instructed your committee, that of enacting a law according to which the conviction of committing an abortion is punished as a felony, was happily carried out as well as a clause whereby it is hoped that convictions can be more readily secured.

When your committee presented to the General Assembly an amendment to the present statutes of Missouri concerning "limitations of actions," the reducing of time from 5 to 2 years, we realized that this was not according to the strict letter of your instructions which advised the reduction of time to one year. After consultation with many members of the Assembly, both in the Upper and Lower House, and after conferring with several legal advisers, your committee was impressed with the difficulty of securing an enactment limiting the time for bringing malpractice suits to two years and as the outcome showed, our apprehensions were well founded. The bill was referred to the committees on Jurisprudence which made an unfavorable report, the reasons for which it is not, in the opinion of your committee, good public policy to discuss. It will require a much more systematic effort and a much more thorough canvass of legislators before their nomination and election to succeed in securing such legislation.

Your committee also lent its assistance to the effort to have laws enacted whereby vital statistics would be gathered. This measure although of the greatest importance to the commercial prosperity of our state and to the general well being of its citizens, did not receive the sanction of the legislators and your committee urgently requests that our successors be instructed to make this one of the first measures for their future consideration.

It will require a campaign of education such as has already been inaugurated in certain portions of the state, notably in Clay county under the leadership of our distinguished veteran member Dr. J. M. Allen, of Liberty. It should be the policy of the medical profession to constantly urge until the people are familiar with it, how valuable it is to report infectious and contagious diseases, not only because it conduces to the health of the people and protects them in their happiness but because it adds to the commercial value of everything which exists in our state.

The harmonious relationship which has been established between this Association and the State Board of Health has in many ways shown the benefits that will come by a continuation of these friendly relations. By law, the State Board of Health is charged with the duty of recommending to the General Assembly such laws as they may deem necessary to improve and advance the sanitary condition of the state. By acting in perfect harmony with it we employ the most valuable means for carrying out the different suggestions which from time to time come to us. The State Board of Health is the medical advisor of the General Assembly and, like the physician in private life, is a factor of great importance in determining the action of his client. During the last session of the legislature your committee has had no more powerful and influential associate than the State Board of Health as represented by all of its members, and I know you will join me in expressing to them in a formal way our acknowledgment of their assistance.

The medical members of the legislature, the largest majority of whom are members of this Association, have demonstrated in a most practical manner, although at great personal sacrifice, the value which they attach to the enactment of proper laws and have proven themselves wise representatives of our profession. Too much praise cannot be meted out to the members of the House and Senate who unceasingly guarded the interests of the people against the machinations of the scheming and the opposition of the selfish. It would be a source of great gratification if to the relatively small phalanx of medical members now in the General Assembly there could be induced to join their ranks an additional number of intelligent, enthusiastic and conscientious physicians from other counties so that the almost six thousand medical men of this state could have adequate representation in the legislature of the state.

Your committee considers itself and through it, this organization under a lasting debt of gratitude to the physicians of the last General Assembly for the efficient and conscientious manner in which they have represented us; and we congratulate the people of this state upon the existence in their midst of such self-sacrificing, public spirited physicians.

It was the privilege of your Committee to report at last year's

session that the enlightened and progressive policy of the Chief Executive of this state had recognized in a substantial manner the value of the medical profession by placing a representative on the various Boards of Managers of the hospitals for the insane. We are this year able to report that in pursuance of this wise statesmanship, the medical profession has upon the Board of Curators of the State University two of the active members of this Association—Dr. John C. Parrish of Vandalia and Dr. S. L. Baysinger of Rolla, both of whom will do credit to our profession in the discharge of the very honorable duties to which they have been assigned; and we congratulate you upon this recognition of the profession of medicine as a factor in the intellectual life and in matters educational of this state.

Respectfully submitted,

GEO. HOMAN,

H. E. PEARSE.

F. J. LUTZ, Chairman.

*The Committee.*

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## REPORT OF THE SECRETARY.

To the president and members of the Missouri State Medical Association:

I have the honor of making the following report for the year just ended.

During the year the card index has been added to materially and at this time contains a record of 6040 names and addresses of physicians of the state, and about 1600 autobiographies of members of the Association. Immediately after the last annual meeting a list of members of the various societies was forwarded to the Secretaries requesting correction and the corrected list furnished to the publication Committee for the August issue of the Journal.

Packages containing the constitution and by-laws, roster blanks, blanks for permanent record, and blank applications for charter, were sent to all councillors of unorganized counties and the secretaries of prospective societies. A number of letters have been written physicians of unauthorized counties notifying them of meetings to be held by the councillor of the district.

Charters have been issued to the following societies: Scott, St. Francois, Dent, Barry, DeKalb, Lewis, Webster.

The Secretary has received the following dues for 1907-1908, the same having been forwarded to the treasurer whose receipt is now on file: Adair, Andrew, Atchison, Audrain, Barton, Barry, Bates, Benton, Boon, Buchanan, Butler, Caldwell, Callaway, Camden, Cape Girardeau, Carroll, Carter-Shannon, Cedar, Chariton, Christian, Clark, Clay, Clinton, Cole, Cooper, Crawford, Daviess, DeKalb, Dent, Dunklin, Franklin, Gasconade, Gentry, Green, Grundy, Harrison,



Henry, Holt, Howard, Howell, Jackson, Jasper, Jefferson, Johnson, Knox, Laclede, Lafayette, Lawrence-Stone, Lewis, Lincoln, Linn, Livingston, Macon, Madison, Marion, Mercer, Miller, Mississippi, Moniteau, Morgan, Monroe, New Madrid, Newton, Nodaway, Perry, Pettis, Phelps, Pike, Platte, Polk, Putnam, Ralls, Randolph, Ray, St. Charles, St. Clair, St. Francois, St. Louis, St. Louis City, Saline, Schuyler, Scott, Shelby, Sullivan, Vernon, Washington, Webster, Worth.

Arrangements have been made with the Southwestern Passenger Association and Western Passenger Association for a rate of one and one-third fare for round trip to the annual meeting. Number of counties in State 115; number of County Societies in affiliation, 103; number of counties for whom no report has been received, 19; number of members for whom dues have been paid for 1907, 2397.

Monthly reports have been made to the American Medical Association giving the names of all members suspended and all new members added.

Press copies of all letters written from the secretary's office have been made and are here for the inspection of the House of Delegates and Judicial Council.

The Following is a recapitulation of work of this office: Number of letters mailed, 1728; number of packages, 81; stamps for registration, 4; journals, 56; total \$39.48.

Respectfully submitted,

C. M. NICHOLSON, Secretary.

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## REPORT OF THE COMMITTEE ON SCIENTIFIC WORK.

To the President and Members of the Missouri State Medical Association:

Your Committee on Scientific Work sent invitations to every affiliated county society to contribute to the program of the Semi-Centennial Meeting.

As a result 63 papers are to be read in the Medical and Surgical Section.

The preliminary program was published in the March, April, and May number of the Journal and advance sheets were sent to the Medical Fortnightly, Medical Herald, Medical Review and Kansas City Index-Lancet, so that additional publicity might be given by those periodicals. 3,500 copies of a 16 page program were printed and 2,500 forwarded to Jefferson City to be sent to the members by the Cole County Medical Society, the remaining 1,000 to be distributed at the annual meeting. The cost of printing and binding was \$76.85.

The credit for the pathological exhibit is due Dr. John Morfit of St. Louis and Dr. Franklin E. Murphy of Kansas City.

The Committee desires to extend especial thanks to Doctor E. J. Goodwin for his valuable services in the preparation of the program.

Respectfully submitted,

C. M. NICHOLSON, Chairman.

J. C. MORFIT.

F. E. MURPHY.

*The Committee.*

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## REPORT OF THE PUBLICATION COMMITTEE.

To the President and Members of the Missouri State Medical Association:

Your Publication Committee hereby makes the following report:

During the year your committee has held monthly meetings and has succeeded in eliminating from the advertisement pages of the Journal advertisements of all remedies where the formula is not given. There are several more which were ordered discontinued.

The Committee consists of Doctor W. G. Moore, Walter B. Dorsett, and B. M. Hypes in addition to the Chairman. The meetings during the past year have been well attended.

During the year 96 original articles, 22 abstracts, 28 editorials, 60 news items and 175 county Society notes from counties in affiliation, tables showing names of affiliated societies with officers and date of meeting have appeared.

The cost of publishing the Journal is as follows:

June, \$165.00, July \$165.14, August \$182.00, September \$175.85, October \$162.00, November \$175.85, December \$199.25, January \$188.80, February \$187.05, March \$178.85, April \$181.67, May \$230.88. Total, \$2192.64.

In compliance with instructions of the Judicial Council the Publication Committee received bids from various printing houses for the publication of the Journal for the next three years. The bid which was most favorable to the Association was from the Medical Press Company and this bid was transmitted to the secretary of the Association, and by him to the Chairman of the Council.

It provided for the publication of 2,500 copies of a 64 page Journal at an annual cost of \$1,200.00; this is about two-thirds of the cost of the publication of the transactions in the form of a volume and at the end of three years the Journal may be published without cost to the Association.

Respectfully submitted,

W. B. DORSETT.

B. M. HYPES.

W. G. MOORE.

C. M. NICHOLSON, Chairman.

*The Committee.*

## TREASURER'S ACCOUNT WITH THE MISSOURI STATE MEDICAL ASSOCIATION

1906-7.

## RECEIPTS.

1906.	
May 18 Cash on hand.....	\$4481 12'
July 26 Sub. Journal.....	3 40
May 9 Excess Bill M. P. Co.....	14 50
May 30 Sub. Journal.....	2 00
Int. on D. bal 1-1-07.....	52 41
Int. on L. bal 5-7-07.....	27 80
Andrew County.....	38 00
Atechison County.....	32 00
Andrew County.....	42 00
Adair County.....	46 00
Berry County.....	64 00
Barton County.....	30 00
Bates County.....	32 00
Benton County.....	26 00
Boone County.....	54 00
Buchanan County.....	178 00
Callaway County.....	32 00
Caldwell County.....	52 00
Camden County.....	14 00
Cape Girardeau County.....	52 00
Carroll County.....	44 00
Cass County.....	58 00
Cedar County.....	28 00
Chariton County.....	50 00
Christian County.....	18 00
Clark County.....	24 00
Clay County.....	44 00
Clinton County.....	34 00
Cole County.....	32 00
Cooper County.....	36 00
Davies County.....	18 00
DeKalb County.....	32 00
Dent County.....	24 00
Dunklin County.....	46 00
Franklin County.....	44 00
Gasconade-Maries-Osage.....	28 00
Gentry County.....	30 00
Greene County.....	94 00
Grundy County.....	16 00
Harrison County.....	36 00
Henry County.....	54 00
Holt County.....	36 00
Howard County.....	46 00
Howell County.....	30 00
Jackson County.....	604 00
Jasper County.....	90 00
Jefferson County.....	32 00
Johnson County.....	56 00
Knox County.....	14 00
Laclede County.....	20 00
Lafayette County.....	68 00
Lawrence-Stone County.....	52 00
Lewis County.....	42 00
Lincoln County.....	20 00
Linn County.....	76 00
Livingston County.....	42 00
Macon County.....	36 00
Madison County.....	24 00
Marion County.....	56 00
Mercer County.....	18 00
Miller County.....	24 00
Mississippi County.....	22 00
Moniteau County.....	48 00
Monroe County.....	40 00
Morgan County.....	18 00
New Madrid County.....	8 00
Newton County.....	46 00
Nodaway County.....	80 00
Pemiscot County.....	10 00
Pettis County.....	60 00
Phelps County.....	22 00
Pike County.....	38 00
Platte County.....	44 00
Polk County.....	12 00
Pulaski County.....	18 00
Putnum County.....	36 00
Randolph County.....	28 00
Ralls County.....	24 00
Ray County.....	24 00
St. Clair County.....	28 00
St. Charles County.....	14 00
St. Genevieve County.....	20 00
St. Francois County.....	24 00
St. Louis County.....	78 00
St. Louis City.....	1094 00

Saline County.....	36 00
Schuyler County.....	20 00
Scotland County.....	36 00
Scott County.....	48 00
Shelby County.....	24 00
Stoddard County.....	12 00
Sullivan County.....	26 00
Vernon County.....	48 00
Warren County.....	26 00
Wayne County.....	20 00
Webster County.....	12 00
Worth County.....	22 00

\$9615 23

## DISBURSEMENTS.

1906	
May	18 E. J. Goodwin, postage...\$ 9 19
"	18 J. Franklin Welch P. S. S. 75 00
"	18 E. L. Chambliss, T. Exp. 20 15
"	18 C. M. Nicholson, Tel. 1 65
"	18 C. M. Nicholson, Salary 50 00
"	18 C. M. Nicholson, Stamps 71 33
"	22 Spalding S. Co. 3 05
"	22 R. D. Hair, Trav. Exp. 4 15
"	26 J. D. Brummall, Trav. Exp. 5 00
"	22 R. L. Johnson, Trav. Exp. 7 15
"	27 E. J. G., Sal. Nov. 18 Dec. 18 50 15
"	27 E. J. G., Sal. Apr 18 May 18 50 15
"	27 I. M. J. Co., May Journal 212 40
"	27 Miss Strong, Stenog. 30 15
June	8 A. M. Ass'n. 1 15
"	8 B. & B., Pt. Co. Prog. 23 40
"	9 Tr. Bond 20 00
"	22 S. S. Co., Printing. 65
"	22 A. C. K., Sten. Surg. Sec. 60 15
"	26 E. J. G., Sal 5-18 to 6-18 50 15
"	26 I. M. J. Co., June Jour. 165 15
"	29 M. Pt. Co. 3 15
"	29 M. Pt. Co. 10 50
"	29 M. Pt. Co. 6 75
"	29 Sp. Stat. Co. 1 90
"	29 R. L. Polk Co. Pt. 6 15
July	13 Congrat. Teleg. 6 96
"	13 Miss Strong, Sten., Sal. 78 15
Aug.	8 B. B. Pt. 5 40
"	12 St. L. But Co. 33 10
"	17 E. J. G., Sal. 6-18 to 7-18 50 15
"	17 M. Pt. Co. 4 40
"	23 M. Pt. Co. 4 85
"	23 M. N., Sal. 3 months. 75 15
Sept.	3 I. M. J. Co., July & Aug J. 347 39
"	3 Miss Strong, Sten. 30 15
"	22 I. M. J. Co., Sept. J. 176 00
"	22 E. J. G., Sal. 8-18 to 9-18 50 15
Oct.	20 I. M. J. Co., Oct. Jour. 162 15
"	20 Dr. Addison, S. M. 7 15
"	27 E. J. G., sal. 9-18 to 10-18 50 15
"	27 M. Pt. Co. 7 50
"	30 Dr. Addison, S. M. 4 15
Nov.	2 Dr. Addison, S. Mem. 3 15
"	2 Dr. Roney, S. M. 7 15
"	2 Dr. Helm, S. M. 12 15
"	3 Dr. Love, S. M. 6 15
"	6 Dr. Roney, S. M. 20 15
"	6 Dr. Helm, S. M. 3 15
"	6 Dr. Addison, S. M. 5 15
"	7 Dr. Helm, S. M. 3 15
"	8 Dr. Love, S. M. 2 15
"	10 Dr. Roney, S. M. 14 00
"	14 Dr. Roney, S. M. 11 15
"	19 Dr. Helm, S. M. 5 15
"	22 Dr. Addison, S. M. 16 15
"	26 Dr. Addison, S. M. 1 15
"	Dr. Addison, S. M. 1 15
"	26 Dr. Roney, S. M. 13 15
"	26 I. M. J. Co. Nov. Jour. 176 00
"	26 E. J. G., Sal. 10-18 to 11-18 50 15
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"	7 Spalding St. Co. 1 15
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"	10 Dr. Jarrett, S. M. 11 15
"	10 Dr. Love, S. M. 2 15
"	10 Dr. Smith, S. M. 2 15



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"	21 Dr. N., Sal. 8-17 to 12-17..	100 15	April	4 Dr. E. J. G., Telegrams...	15 71
"	21 E. J. G., Sal. 11-18 to 12-18	50 15	"	9 I. M. J. Co., March Jour..	179 00
"	21 I. M. Jour Co., Dec. Jour	199 40	"	15 E. J. G., Sal. 2-18 to 3-18..	50 15
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"	24 I. M. J. Co., Jan. Jour....	180 95	"	20 Mod. Pt. Co.....	3 30
"	24 E. J. G., Sal. 12-18 to 1-18.	50 15	"	23 E. J. G., Sal. 3-18 to 4-18..	50 15
"	31 B. & B. Pt. Co.....	2 15	May	1 E. J. G., Tel. Toll.....	1 20
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 Grim, E. A., Kirksville, Mo.  
 Grim, E. C., Kirksville, Mo.  
 Gashwiler, J. S., Novinger, Mo.  
 Hall, W. S., Novinger, Mo.  
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 Martin, J. W., Kirksville, Mo.  
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 Noe, L., Connelville, Mo.  
 Nunn, J. C., Novinger, Mo.  
 Quinn, E. S., Kirksville, Mo.  
 Sparling, G. A., Kirksville, Mo.  
 Wilson, C. S., Green City, Mo.  
 Williams, J. W., Kirksville, Mo.

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Allen, C. L., Cosby, Mo.  
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 Danley, W. E., Avenue City, Mo.  
 Bennett, E. C., Bolckow, Mo.  
 Best, W. W., Bolckow, Mo.  
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 Bailey, W. H., Savannah, Mo.  
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 Kerr, W. M., Savannah, Mo.  
 Kelley, R. R., Amazonia, Mo.  
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 Mollison, J. Q., Bolckow, Mo.  
 Miles, B. E., Filmore, Mo.  
 Myer, W. C., Savannah, Mo.  
 Parks, D. C., Filmore, Mo.  
 Southerland, J. C., Savannah, Mo.

#### ATCHISON COUNTY.

Chamberlain, G. W. E., Rockport, Mo.  
 Chamberlain, O. M. C., Rockport, Mo.  
 Hedgpath, J. H., Rockport, Mo.  
 Holliday, J. A., Tarkio, Mo.  
 Hunter, J. A., Fairfax, Mo.  
 Hunter, Owen A., Fairfax, Mo.  
 Lewis, E. A., Rockport, Mo.  
 Lott, G. W., Westboro, Mo.  
 McMichael, A., Rockport, Mo.  
 Postlewaite, J. A., Tarkio, Mo.  
 Richards, E. E., Tarkio, Mo.  
 Safford, W. G., Tarkio, Mo.  
 Settles, Chas. T., Rockport, Mo.  
 Strickland, W. R., Rockport, Mo.  
 Taylor, E. P., Fairfax, Mo.  
 Waugh, C. M., Tarkio, Mo.  
 Whiteford, E. P., Westboro, Mo.

#### AUDRAIN COUNTY.

Berry, R. W., Mexico, Mo.  
 Bland, W. W., Vandalia, Mo.  
 Cave, E. S., Mexico, Mo.  
 Coil, P. E., Mexico, Mo.  
 Cooper, J. C., Rowena, Mo.  
 Cornett, W. E., Rush Hill, Mo.  
 Crawford, M. E., Mexico, Mo.

Douglass, W. H., Benton City, Mo.  
 Flynt, J. F., Molino, Mo.  
 Gibbs, R. T., Mexico, Mo.  
 Griffin, Fred, Mexico, Mo.  
 Lofton, E. A., Laddonia, Mo.  
 McCall, W. K., Worcester, Mo.  
 McFarland, W. W., Mexico, Mo.  
 Parish, J. C., Vandalia, Mo.  
 Rodes, N. R., Mexico, Mo.  
 Rodes, W. R., Mexico, Mo.  
 Rothwell, C. A., Mexico, Mo.  
 Toalson, G. F., Mexico, Mo.  
 Wallace, J. E., Mexico, Mo.

#### BARTON COUNTY.

Allee, G. D., Lamar, Mo.  
 Brown, C. F., Lamar, Mo.  
 Brooks, J. M., Golden City, Mo.  
 Coleman, W. O., Nashville, Mo.  
 Duckett, T. H., Millford, Mo.  
 Gish, G. J. P., Minden Mines, Mo.  
 Guthrie, J. F., Golden City, Mo.  
 Griffin, W. L., Lamar, Mo.  
 Locker, G. E., Iantha, Mo.  
 McComb, J. L., Lamar, Mo.  
 Miller, E. F., Verdellia, Mo.  
 Stone, A. B., Lamar, Mo.  
 Van Meter, A., Lamar, Mo.  
 Warren, J. F., Boston, Mo.

#### BARRY COUNTY.

Bailey, W. T., Cassville, Mo.  
 Chandler, S. W., Cassville, Mo.  
 Dusenbury, C. T., Monett, Mo.  
 Gladden, R. B., Purdy, Mo.  
 Hagler, M. C., Monett, Mo.  
 Hawkins, A. S., Monett, Mo.  
 Jones, Alva, Monett, Mo.  
 Leath, L. R., Butterfield, Mo.  
 Miller, D. E., Monett, Mo.  
 Mitchell, D. L., Cassville, Mo.  
 Mitchell, John, Purdy, Mo.  
 Newman, S. A., Cassville, Mo.  
 Northcut, L. B., Washburn, Mo.  
 Pound, J. S., Shell Knob, Mo.  
 Russell, J. M., Monett, Mo.  
 Searcy, Wm. P., Exeter, Mo.  
 Trumbower, M. R., Monett, Mo.  
 West, Wm. M., Monett, Mo.

#### BATES COUNTY.

Boulware, T. C., Butler, Mo.  
 Chastain, E. N., Butler, Mo.  
 Compton, U. J., Pleasant Gap, Mo.  
 Forster, T. W., Butler, Mo.  
 Gilmore, E. E., Adrian, Mo.  
 Hulett, R. F., Rich Hill, Mo.  
 Lane, G. G., Sprague, Mo.  
 Lockwood, T. F., Butler, Mo.  
 Miller, Sherman, Ulrich, Mo.  
 Morton, J. R., Butler, Mo.  
 Powers, C. E., Amoret, Mo.  
 Rhoades, H. A., Foster, Mo.  
 Spoon, E. E., Amsterdam, Mo.  
 Whipple, W. L., Pleasant Gap, Mo.  
 Williams, J. H., Hume, Mo.  
 Zey, E. G., Butler, Mo.

#### BENTON COUNTY.

Carl, C. A., Cross Timbers, Mo.  
 Clark, J. W., Fristoe, Mo.

Davis, S. O., Warsaw, Mo.  
 Dick, M., Cole Camp, Mo.  
 Dillon, Marrion, Fairfield, Mo.  
 Greeson, G. A., Lincoln, Mo., R. P. D.  
 Holtzen, E. E., Cole Camp, Mo.  
 Jones, W. G., Lincoln, Mo.  
 Pomeroy, P. L., Warsaw, Mo.  
 Rhodes, E. L., Lincoln, Mo.  
 Savage, H. G., Warsaw, Mo.  
 Schwald, N. A., Cole Camp, Mo.  
 Stratton, S. O., Edmonson, Mo.  
 Walton, J. H., Ionia, Mo.

## BOONE COUNTY.

Angell, W. E., Rocheport, Mo.  
 Austin, C. W., Columbia, Mo.  
 Calvert, W. J., Columbia, Mo.  
 Chinn, E. H., Rocheport, Mo.  
 Fisher, J. M., Columbia, Mo.  
 Gentry, E. N., Sturgeon, Mo.  
 Gordon, J., Columbia, Mo.  
 Hampton, Z. M., Centralia, Mo.  
 Hickerson, J. T., Centralia, Mo.  
 Jackson, C. M., Columbia, Mo.  
 McAlester, A. W., Columbia, Mo.  
 McAllister, W. A., Centralia, Mo.  
 McComas, A. R., Sturgeon, Mo.  
 Meyer, Max, Columbia, Mo.  
 Miller, W. McN., Columbia, Mo.  
 Moss, Woodson, Columbia, Mo.  
 Nifong, F. G., Columbia, Mo.  
 Norris, W. A., Columbia, Mo.  
 Noyes, Guy, Columbia, Mo.  
 Farmer, Chas. C., Hartsburg, Mo.  
 Farmer, J. E., Hartsburg, Mo.  
 Thornton, J. E., Columbia, Mo.

## BUCHANAN COUNTY.

(All addresses St. Joseph, Mo., unless otherwise stated).

Bansbach, J. J., 823 Fred. Ave.  
 Ballard, E. S., King Hill Bldg.  
 Bauman, L. C., 4th & Edmond.  
 Bell, J. M., 710 Felix St.  
 Bigham, D. F., Easton, Mo.  
 Bode, L. F., 520 S. 6th St.  
 Bowen, J. K. P., Moss Bldg.  
 Byrd, Chas. F., 2301 St. Joe Ave.  
 Byrne, J. I., Bank of Commerce Bldg.  
 Campbell, O. B., Hughes Bldg.  
 Carpenter, S. F., Hughes Bldg.  
 Cloud, S. E., 1302 N. 3rd.  
 Dandurant, L. J., 8th & Felix St.  
 Davis, E. C., 2018 S. 11th St.  
 Davis, W. B., 518 Francis.  
 Deffenbaugh, W. B., 710 Felix St.  
 Donelan, E. A., 809 Francis St.  
 Dowell, Robt. F., Agency, Mo.  
 Doyle, T. H., 107 N. 9th St.  
 Doyle, J. M., 107 N. 9th St.  
 Dunsmore, J. M., 9th & Charles St.  
 Elam, W. T., Logan Blk.  
 Farber, M. J., 520½ Francis St.  
 Fassett, Chas. Wood, Krug Park Pl.  
 Ferguson, J. W., 710 Felix St.  
 Forgrave, H. S., King Hill Bldg.  
 Forgrave, L. R., Logan Blk.  
 French, J. A., 408 S. 8th St.  
 Fulkerson, P. P., 6th & Francis St.  
 Geiger, C. G., 613 Francis.  
 Geiger, Jacob, 613 Francis St.  
 Gebhart, O. C., King Hill Bldg.  
 Gleaves, O. G., 3117 N. 11th St.  
 Goetze, W. F., 7th & Edmond.  
 Good, C. A., Logan Bldg.  
 Graham, J. K., Logan Bldg.  
 Gray, A. L., 122 S. 9th St.  
 Green, H. A., 704 Felix St.  
 Heddens, J. W., 614 Francis St.  
 Holley, A. E., Rock Island Bldg.  
 Hull, W. S., Faucett, Mo.  
 Humfreville, D. L., 518 Francis St.  
 Islaub, J. W., 207 S. 14th St.  
 Kenney, W. L., Commercial Bldg.  
 Kessler, S. F., 614 Francis St.  
 Lee, Herbert, Ballinger Bldg.  
 Leonard, P. I., 613 Francis St.  
 Lockwood, W. D., 407½ Illinois Ave.  
 Long, L. S., 820 Edmond St.

McCoy, J. H., 710 Felix St.  
 McGill, W. J., King Hill Bldg.  
 McGlothlin, A. B., 720 Francis St.  
 McInerney, Joseph M., 4th & Edmond.  
 Mayes, J. W., Easton, Mo.  
 Minton, W. H., King Hill Bldg.  
 Morton, Daniel, King Hill Bldg.  
 Morrison, W. S., Rushville, Mo.  
 Osborn, J. F., 2228 S. 6th St.  
 Owens, J. F., Ballinger Bldg.  
 Patterson, Frederick A., 205 Hughes Bldg.  
 Paul, T. M., 825 Fred. Ave.  
 Pitts, Barton, Pitts Bldg.  
 Potter, T. E., 7th & Edmond St.  
 Reynolds, J. B., 417 Francis St.  
 Richardson, W. H., Rock Island Bldg.  
 Riley, J. B., Commercial Bldg.  
 Sampson, Chris. M., 115 N. 5th St.  
 Sampson, J. H., 115 N. 5th St.  
 Senn, Geo., 220 N. 9th.  
 Schmid, W. F., Pitts Bldg.  
 Simcoe, Charles B., 613 Francis St.  
 Smith, B. H., Hosp. No. 2.  
 Smith, J. C., Hosp. No. 2.  
 Spencer, F. H., 122 S. 9th.  
 Stamey, J. Thomas, 2624 St. Joe Ave.  
 Thomas, C. E., Commercial Bldg.  
 Thompson, G. R., Hosp. No. 2.  
 Timmerman, A. R., 4101½ Ill. Ave.  
 Todd, L. A., Logan Bldg.  
 Toothaker, B. W., Hughes Bldg.  
 Walker, H. L., 926 N. 3rd St.  
 Wallace, C. H., Logan Blk.  
 Willman, R., 301 N. 11th St.  
 Woodson, C. R., Hosp. No. 2.  
 Woodson, L. B., Rushville, Mo.

## BUTLER COUNTY.

Cadwell, Victor, Poplar Bluff, Mo.  
 Dewitt, Eskew, Poplar Bluff, Mo.  
 Johnson, J. P., Fisk, Mo.  
 Kendall, A. W., Poplar Bluff, Mo.  
 Mott, J. W., Poplar Bluff, Mo.  
 Norwine, J. J., Poplar Bluff, Mo.  
 Rowe, A. R., Poplar Bluff, Mo.  
 Seybold, Ira W., Poplar Bluff, Mo.  
 Williamson, C. W., Poplar Bluff, Mo.  
 Windsor, A., Poplar Bluff, Mo.  
 Wright, C. O., Poplar Bluff, Mo.

## CALDWELL COUNTY.

Aplin, Wm., Hamilton, Mo.  
 Brown, Tinsley, Hamilton, Mo.  
 Can, B. F., Polo, Mo.  
 Cowley, Geo. B., Cowgill, Mo.  
 DeLamater, W., Kidder, Mo.  
 Dewey, C. O., Breckenridge, Mo.  
 Dowell, G. S., Braymer, Mo.  
 Dodge, R. K., Polo, Mo.  
 Dwight, K. M., Hamilton, Mo.  
 Eads, L. J., Hamilton, Mo.  
 Goins, G. W., Breckenridge, Mo.  
 Hudson, J. W., Polo, Mo.  
 Leeper, C. C., Braymer, Mo.  
 Lindley, W. L., Hamilton, Mo.  
 Mount, R. L., Polo, Mo.  
 McMurtsey, C. T., Kidder, Mo.  
 McConkey, C. M., Mirabile, Mo.  
 Scanlon, T. W., Polo, Mo.  
 Schroeder, H. A., Braymer, Mo.  
 Shouse, W. B., Kingston, Mo.  
 Smith, D. S., Cowgill, Mo.  
 Tiffin, Clayton, Hamilton, Mo.  
 Waterman, J. A., Breckenridge, Mo.  
 Wilhelm, B. Dorris, Kansas City, Mo.  
 Wilkerson, J. O., Cowgill, Mo.  
 Woldridge, H. L., Breckenridge, Mo.  
 Woolsey, C. B., Braymer, Mo.

## CALLAWAY COUNTY.

Baker, N. F., Fulton, Mo.  
 Berry, J. W., Reform, Mo.  
 Christian, C. H., New Bloomfield, Mo.  
 Crews, R., M. Williamsburg, Mo.  
 Davis, J. R., Mokane, Mo.  
 Evans, E. E., Fulton, Mo.  
 Ferguson, A. B., Auxvasse, Mo.  
 Harrison, J. F., Fulton, Mo.  
 McCall, G. D., Fulton, Mo.



Moore, J. G., Fulton, Mo.  
 Owen, H. I., Fulton, Mo.  
 Roots, G. F., Tebbitts, Mo.  
 Williams, P. E., Fulton, Mo.  
 Williamson, W. H., Wainwright, Mo.  
 Yates, Martin, Fulton, Mo.  
 Young, D. H., Fulton, Mo.

## CAMDEN COUNTY.

Claiborn, E. G., Decaturville, Mo.  
 Clark, W. J., Linn Creek, Mo.  
 Ford, J. S., Linn Creek, Mo.  
 Hicks, E. S., Macks Creek, Mo.  
 Mills, Sherman, Macks Creek, Mo.  
 Moore, Geo. M., Linn Creek, Mo.  
 Moulder, G. A., Linn Creek, Mo.  
 Myers, G. T., Macks Creek, Mo.

## CAPE GIRARDEAU COUNTY.

Adkins, R. F., Jackson, Mo.  
 Chandler, J. J., Lutesville, Mo.  
 Chostner, N. F., Dutchtown, Mo.  
 Cunningham, H. L., Cape Girardeau, Mo.  
 Dalton, A. E., Friedheim, Mo.  
 Ellis, J. L., Oak Ridge, Mo.  
 Hays, W. B., Jackson, Mo.  
 Henderson, R. T., Jackson, Mo.  
 Higdon, E. E., Allenville, Mo.  
 Hope, D. H., Cape Girardeau, Mo.  
 Howard, W. N., Cape Girardeau, Mo.  
 Nettles, F. H., Cape Girardeau, Mo.  
 Porterfield, J. D., Jr., Cape Girardeau, Mo.  
 Rosenthal, M., Cape Girardeau, Mo.  
 Sander, C. A., Marble Hill, Mo.  
 Schultz, G. B., Cape Girardeau, Mo.  
 Statler, W. K., Oak Ridge, Mo.  
 Tarlton, G. W., Cape Girardeau, Mo.  
 Vineyard, G. W., Jackson, Mo.  
 Walker, G. W., Cape Girardeau, Mo.  
 Wichetrich, R. F., Cape Girardeau, Mo.  
 Wilson, E. H. G., Cape Girardeau, Mo.  
 Winters, H. S., Cape Girardeau, Mo.  
 Witmer, C. M., Marble Hill, Mo.  
 Woods, S. E., Jackson, Mo.  
 Yount, W. E., Cape Girardeau, Mo.

## CARROLL COUNTY.

Austin, C. S., Carrollton, Mo.  
 Avery, T. W., DeWitt, Mo.  
 Baird, W. C., Bogard, Mo.  
 Boggs, J. D., Roads, Mo.  
 Brown, H. G., Bosworth, Mo.  
 Cook, R. F., Carrollton, Mo.  
 Cooper, J. C., Carrollton, Mo.  
 Craton, M. W., Carrollton, Mo.  
 Highsmith, G. R., Carrollton, Mo.  
 Kamp, W. P., Hale, Mo.  
 Logan, J. P., DeWitt, Mo.  
 Miller, R. M., Bogard, Mo.  
 Samuels, L., Carrollton, Mo., R. F. D. No. 6.  
 Shawhan, R. G., Hale, Mo.  
 Spencer, N. A., DeWitt, Mo.  
 Squires, J. W., DeWitt, Mo.  
 Stephenson, J. T., Tina, Mo.  
 Tull, H. W., Carrollton, Mo.  
 Wheat, B. F., Hale, Mo.  
 Williams, C. S., Carrollton, Mo.  
 Windsor, W. S., Bosworth, Mo.

## CARTER-SHANNON COUNTY.

No Report Received.

## CASS COUNTY.

Adair, T. W., Archie, Mo.  
 Anderson, G. M., Pleasant Hill, Mo.  
 Barrett, W. H., Harrisonville, Mo.  
 Beckman, Wm. S., Strassburg, Mo.  
 Brierly, H. A., Peculiar, Mo.  
 Burney, R. H., Freeman, Mo.  
 Chaffin, W. F., Raymore, Mo.  
 Clemons, W. M., Cleveland, Mo.  
 Conger, D. W., Harrisonville, Mo.  
 Crawford, H. S., Harrisonville, Mo.  
 Elder, A. R., Harrisonville, Mo.  
 Ellis, F. B., Garden City, Mo.  
 Fair, S. W., Belton, Mo.  
 Farnsworth, A. D., Drexel, Mo.  
 Farrow, G. W., East Lynne, Mo.  
 Foster, F. W., East Lynne, Mo.

Hammond, Mart, Raymore, Mo.  
 Jerard, H., Pleasant Hill, Mo.  
 Keller, K. G., Freeman, Mo.  
 Loat, B. B., Archie, Mo.  
 Overholser, M. P., Harrisonville, Mo.  
 Palmer, W. C., Dayton, Mo.  
 Prentiss, H. S., Pleasant Hill, Mo.  
 Ramey, R. D., Garden City, Mo.  
 Rhoades, M. H., Austin, Mo.  
 Schoor, A. H., Adrian, Mo.  
 Schoor, E., Garden City, Mo.  
 Smith, A. M., Pleasant Hill, Mo.  
 Tout, B. B., Archie, Mo.  
 Triplett, J. S., Harrisonville, Mo.  
 Yeagle, R. P., Pleasant Hill, Mo.

## CEDAR COUNTY.

Brown, R. A., Stockton, Mo.  
 Crawford, R. O., El Dorado Springs, Mo.  
 Dawson, J. W., El Dorado Springs, Mo.  
 Dunnaway, L. T., Caplinger Mills, Mo.  
 Edgar, C. A., El Dorado Springs, Mo.  
 Hill, K., Eldorado Springs, Mo.  
 Holmes, A. T., Jerico, Mo.  
 Liston, E. H., Balm, Mo.  
 Marr, R. B., Filley, Mo.  
 Mynatt, A. J., Jerico Springs, Mo.

## CHARITON COUNTY.

Austin, M. B., Salisbury, Mo.  
 Banning, T. F., Salisbury, Mo.  
 Billeter, W. J., Bynumville, Mo.  
 Brown, G. W., Triplett, Mo.  
 Brummall, J. D., Salisbury, Mo.  
 Baker, W. L., Salisbury, Mo.  
 Dewey, W. T., Keytesville, Mo.  
 Epperly, R. G., Prairie Hill, Mo.  
 Gaines, J. R., Mussel Fork, Mo.  
 Hardy, J. W., Sumner, Mo.  
 Hawkins, G. W., Triplett, Mo.  
 Hughes, B., Keytesville, Mo.  
 Jennings, C. A., Salisbury, Mo.  
 Knott, I., Keytesville, Mo.  
 Kirkpatrick, H. E., Salisbury, Mo.  
 Lawhorn, C. W., Forest Green, Mo.  
 Lewis, A. L., Salisbury, Mo.  
 McAdam, J. D., Prairie Hill, Mo.  
 McEwen, Oliver, Shannondale, Mo.  
 Parker, I. H. P., Salisbury, Mo.  
 Pitney, Orville, Forest Green, Mo.  
 Tatum, Harry C., Brunswick, Mo.  
 Temple, C. H., Rockford, Mo.  
 Todd, W. T., Forest Green, Mo.  
 Wallace, J. S., Brunswick, Mo.  
 Welch, J. F., Salisbury, Mo.

## CHRISTIAN COUNTY.

Brown, F. H., Billings, Mo.  
 Bruton, J. W., Ozark, Mo.  
 Cheatham, R. F., Clever, Mo.  
 Farthing, R. R., Sparta, Mo.  
 Laer, T. R., Billings, Mo.  
 Nagel, P. E., Billings, Mo.  
 Robertson, J. A., Ozark, Mo.  
 Smith, W. L., Sparta, Mo.  
 Young, J. C., Ozark, Mo.

## CLARK COUNTY.

Bridges, J. R., Kahoka, Mo.  
 Callihan, R. G., Luray, Mo.  
 Crumley, A. C., Wyaconda, Mo.  
 Geeslin, P. A., Luray, Mo.  
 Haase, Freeman, Revere, Mo.  
 Hiller, F. B., Kahoka, Mo.  
 Hinron, C. A., Revere, Mo.  
 Rebo, L. A. S., Alexandria, Mo.  
 Reese, H. S., Wayland, Mo.  
 Sisson, W. B., Kahoka, Mo.  
 Teel, A. W., Kahoka, Mo.  
 Young, J. A., Wyaconda, Mo.

## CLAY COUNTY.

Allen, J. M., Liberty, Mo.  
 Ashley, M. A., Excelsior Springs, Mo.  
 Bogart, T. N., Excelsior Springs, Mo.

Fulton, F. H., Lathrop, Mo.  
 Gaines, J. J., Excelsior Springs, Mo.  
 Griffin, J. M., Excelsior Springs, Mo.  
 Jones, H. S., Linden, Mo.  
 Jones, J. L., Linden, Mo.  
 Lightfoot, F., Excelsior Springs, Mo.  
 Lowrey, Ernest, Excelsior Springs, Mo.  
 Mathews, F. H., Liberty, Mo.  
 Miller, E. H., Liberty, Mo.  
 Sevier, R. E., Liberty, Mo.  
 Suddarth, C. H., Smithville, Mo.  
 Ralph, A. B., Missouri City, Mo.  
 Rice, J. T., Excelsior Springs, Mo.  
 Rice, J. J., Kearney, Mo.  
 Rothwell, J. H., Liberty, Mo.  
 Rowell, H., Kearney, Mo.  
 Tadlock, H. L., Holt, Mo.  
 Wallace, W. S., Excelsior Springs, Mo.  
 Ward, T. J., Birmingham, Mo.

CLINTON COUNTY.

Colley, E. A., Plattsburg, Mo.  
 Franklin, J. A., Cameron, Mo.  
 Kay, John, Perrin, Mo.  
 Longfield, Jesse, Turney, Mo.  
 Peters, M. L., Cameron, Mo.  
 Rea, Robt. W., Plattsburg, Mo.  
 Rush, G. B., Lathrop, Mo.  
 Steckman, P. M., Plattsburg, Mo.  
 Sturgis, John, Perrin, Mo.

COLE COUNTY.

Bedford, S. V., Jefferson City, Mo.  
 Chastain, C. W., Jefferson City, Mo.  
 Clark, W. A., Jefferson City, Mo.  
 Enloe, C. F., Jefferson City, Mo.  
 Ettmueller, G., Jefferson City, Mo.  
 Hill, J. A., Jefferson City, Mo.  
 Hough, C. P., Jefferson City, Mo.  
 Leach, I. N., Jefferson City, Mo.  
 Lopp, J. E., Jefferson City, Mo.  
 Martin, J. B., Jefferson City, Mo.  
 Myers, H. C., Jefferson City, Mo.  
 Norwood, W. W., Jefferson City, Mo.  
 Sneed, C. M., Jefferson City, Mo.  
 Son, E. R., Jefferson City, Mo.  
 Thorpe, J. L., Jefferson City, Mo.

COOPER COUNTY.

Barnes, H. T., Pilot Grove, Mo.  
 Barnes, W. S., Pilot Grove, Mo.  
 Cochran, O. W., Gooch Mill, Mo.  
 Elliott, W. H., Bunceon, Mo.  
 Evans, R. L., Boonville, Mo.  
 Hurt, P. L., Boonville, Mo.  
 Lionberger, J. R., Boonville, Mo.  
 McDonald, H. A., Pisgah, Mo.  
 Meredith, A. L., Wooldridge, Mo.  
 Monroe, A. E., Otterville, Mo.  
 Nelson, A. W., Bunceon, Mo.  
 Pendleton, T. O., Pilot Grove, Mo.  
 Reynolds, W. H., Lupus, Mo.  
 Smiley, F. R., Boonville, Mo.  
 Smith, A. J., Boonville, Mo.  
 Van Ravenswaay, C. H., Boonville, Mo.

CRAWFORD COUNTY.

No Report Received.

DAVIESS COUNTY.

Bickel, James T., Winston, Mo.  
 Brosius, W. L., Gallatin, Mo.  
 Cox, J. L., Winston, Mo.  
 Henry, Anna M., Pattonsburg, Mo.  
 Jarrett, S. S., Pattonsburg, Mo.  
 Parker, J. Z., Pattonsburg, Mo.  
 Smith, M. A., Gallatin, Mo.  
 Songer, H. E., Jamesport, Mo.  
 Wetzell, N. M., Jameson, Mo.

DE KALB COUNTY.

Clark, Wm. J., Maysville, Mo.  
 Elliott, J. R., Clarksdale, Mo.  
 Evans, R. A., Amity, Mo.

Gale, W. S., Osborne, Mo.  
 Guinn, J. C., Clarksdale, Mo.  
 Lee, L. E., Weatherby, Mo.  
 Perkins, O. L., Union Star, Mo.  
 Reynolds, E. M., Union Star, Mo.  
 Richey, L. A., Fairport, Mo.  
 Saunders, L. E., Stewartville, Mo.  
 Small, J. F., Stewartville, Mo.  
 Stroup, E. R., Weatherby, Mo.  
 Varner, A. O., Union Star, Mo.  
 Yeater, H. P., Maysville, Mo.

DENT COUNTY.

Arthur, S. F., Lecomma, Mo.  
 Conway, R. H., Mounce, Mo.  
 Calhoun, D. S., Sligo, Mo.  
 Craig, L. B., Salem, Mo.  
 Cummings, W. P., Salem, Mo.  
 Duncan, E. A., Salem, Mo.  
 Gordon, J. B., Gila, Mo.  
 Hunt, T. G., Lenox, Mo.  
 Lenox, W. M., Lake Spring, Mo.  
 McMurtrey, A. T., Salem, Mo.  
 Rudd, W. E., Salem, Mo.  
 Welch, J. C., Salem, Mo.

DUNKLIN COUNTY.

Baldwin, Paul, Kennett, Mo.  
 Bond, V. H., Cotton Plant, Mo.  
 Egbert, T. H., Kennett, Mo.  
 Finney, W. B., Kennett, Mo.  
 Harrison, A. S., Kennett, Mo.  
 Johnson, G. L., Kennett, Mo.  
 Kelley, N. F., Kennett, Mo.  
 Mobley, A. B., Kennett, Mo.  
 Rigdon, T. J., Kennett, Mo.

FRANKLIN COUNTY.

Booth H. A., Pacific, Mo.  
 Briegleb, C. F., St. Clair, Mo.  
 Brown, A. C., Moselle, Mo.  
 Dunigan, J. P., Sullivan, Mo.  
 Eimbeck, A. F., New Haven, Mo.  
 Eimbeck, Wm. F., New Haven, Mo.  
 Hempker, W. H., Catawissa, Mo.  
 Hume, E. L., Bourbon, Mo.  
 Kitchell, W. E., St. Clair Mo.  
 Lane, A., Sullivan, Mo.  
 Mankopf, B. E., New Haven, Mo.  
 May, H. A., Washington, Mo.  
 McMay, A. L., Pacific, Mo.  
 Isbell, J., Washington, Mo.  
 North, W. R., Labadie, Mo.  
 Poppenhusen, H. A. C., Washington, Mo.  
 Rusk, E. McD., Villa Ridge, Mo.  
 Rusk, J. A., Gray Summit, Mo.  
 Schudde, O. N., Sullivan, Mo.  
 Smith, Augusta, Pacific, Mo.  
 Snow, A. E., Union, Mo.

GASCONADE-MARIES-OSAGE COUNTY.

Aufderheide, F., Drake, Mo.  
 Burgess, J. W., Belle, Mo.  
 Byler, Wm. F., Koeltztown, Mo.  
 Engelbrecht, John, Stony Hill, Mo.  
 Ferrell, J. J., Owensville, Mo.  
 Ferrell, W. R., Bland, Mo.  
 Nieweg, J. W., Lois, Mo.  
 Neely, J. E., Vancleve, Mo.  
 Jose, J. E., Belle, Mo.  
 Radamacker, J. J., Meta, Mo.  
 Seba, E. W., Bland, Mo.  
 Seba, J. D., Bland, Mo.  
 Spurgon, M. E., Red Bird, Mo.  
 Terrill, S. J., Meta, Mo.

GENTRY COUNTY.

Barger, J. N., Darlington, Mo.  
 Brooks, W. W., Stanberry, Mo.  
 Crockett, J. F., Stanberry, Mo.  
 Conard, J. W., Albany, Mo.  
 Landis, H. B., King City, Mo.  
 Lindley, E. R., Stanberry, Mo.  
 Long, L. H., Berlin, Mo.  
 Martin, W. T., Albany, Mo.  
 Patton, C. O., Stanberry, Mo.

Patton, H. J., McFall, Mo.  
 Smith, G. W., Albany, Mo.  
 Whitely, G. W., Albany, Mo.

## GREENE COUNTY.

Armstrong, A., Springfield, Mo.  
 Barnes, G. W., Springfield, Mo.  
 Bartlett, J. R., Springfield, Mo.  
 Beers, E. G., Springfield, Mo.  
 Boyd, J. R., Springfield, Mo.  
 Camp, W. A., Springfield, Mo.  
 Carter, O. N., Brookline, Mo.  
 Clark, J. W., Springfield, Mo.  
 Coffelt, T. A., Springfield, Mo.  
 Cowan, R. M., Springfield, Mo.  
 Cox, Lee, Springfield, Mo.  
 Coy, W. A., Springfield, Mo.  
 Crane, T. V. B., Springfield, Mo.  
 Elkins, B. C., Springfield, Mo.  
 Evans, E. E., Bois D'Arc, Mo.  
 Evans, E. L., Springfield, Mo.  
 Farnsworth, D. B., Springfield, Mo.  
 Fortner, B. F., Springfield, Mo.  
 Fulbright, J. H., Springfield, Mo.  
 Fulton, C. E., Springfield, Mo.  
 Fuson, F. B., Springfield, Mo.  
 Hill, H. S., Springfield, Mo.  
 James, H., Springfield, Mo.  
 James, W. C., Springfield, Mo.  
 Keer, U. F., Springfield, Mo.  
 Knabb, E., Springfield, Mo.  
 McClure, L. E., Walnut Grove, Mo.  
 Matthews, J. C., Springfield, Mo.  
 Mayfield, M. H., Springfield, Mo.  
 Nixon, J. H., Springfield, Mo.  
 Oldham, J. D., Springfield, Mo.  
 Ormsbee, J. L., Springfield, Mo.  
 Patterson, W. P., Springfield, Mo.  
 Peak, O. L., Springfield, Mo.  
 Perry, J. K., Walnut Grove, Mo.  
 Pipkin, R. L., Springfield, Mo.  
 Purselley, W. L., Springfield, Mo.  
 Ralston, J. P., Springfield, Mo.  
 Rienhoff, Wm., Springfield, Mo.  
 Ross, F. E., Springfield, Mo.  
 Sherman, D. U., Springfield, Mo.  
 Smith, W. M., Springfield, Mo.  
 Tefft, J. E., Springfield, Mo.  
 Terry, N. F., Springfield, Mo.  
 Tickle, S. W., Springfield, Mo.  
 Williams, J. W., Springfield, Mo.  
 Williams, N. C., Springfield, Mo.  
 Willier, A. F., Springfield, Mo.  
 Woody, C. E., Springfield, Mo.

## GRUNDY COUNTY.

Coon, D. W., Trenton, Mo.  
 Davenport, R. G., Trenton, Mo.  
 Elder, A. L., Trenton, Mo.  
 Fulkerson, W. D., Trenton, Mo.  
 Sutton, Bertha, Trenton, Mo.  
 Webster, C. L., Trenton, Mo.  
 Wright, J. B., Trenton, Mo.

## HARRISON COUNTY.

Broyles, F. H., Bethany, Mo.  
 Bryson, E. H., Bethany, Mo.  
 Chipp, J. K., New Hampton, Mo.  
 Dunkerson, E., Hatfield, Mo.  
 Eades, M. H., New Hampton, Mo.  
 Ferguson, R. E., Gilman City, Mo.  
 Gwinn, G. E., Bethany, Mo.  
 Mitchell, A. C., Blythedale, Mo.  
 Morroway, J. H., Ridgeway, Mo.  
 Reynolds, A. C., Martinsville, Mo.  
 Richards, N. H., Eagleville, Mo.  
 Robertson, C. H., Eagleville, Mo.  
 Shibley, John, Gilman City, Mo.  
 Stewart, B. S., Bethany, Mo.  
 Swint, Wm., Gilman City, Mo.  
 Vandivert, A. H., Bethany, Mo.  
 Walker, Jackson, Bethany, Mo.  
 Wiley, W. H., Ridgeway, Mo.  
 Williams, A. W., Ridgeway, Mo.

## HENRY COUNTY.

Barr, B. B., Clinton, Mo.  
 Beaty, J. G., Huntingdale, Mo.  
 Benway, Wm. H., Deepwater, Mo.  
 Blackmore, F. A., Windsor, Mo.  
 Bradley, W. P., Windsor, Mo.  
 Bradshaw, J. F., Montrose, Mo.  
 Britts, J. H., Clinton, Mo.  
 Bronaugh, J. H., Calhoun, Mo.  
 Derwent, A. E., Clinton, Mo.  
 Douglass, F. M., Clinton, Mo.  
 Gibbins, Wm. H., Clinton, Mo.  
 Gray, A. A., Calhoun, Mo.  
 Griffith, C. E., Windsor, Mo.  
 Haire, R. D., Clinton, Mo.  
 Hampton, J. R., Clinton Ford, R. F. D., No. 1.  
 Head, G. W., Windsor, Mo.  
 Menecs, G. W., Clinton, Mo.  
 Miller, J. M., Montrose, Mo.  
 Peelor, Edwin C., Coal, Mo.  
 Poague, S. A., Clinton, Mo.  
 Russell, J. J., Deepwater, Mo.  
 Shankland, W. M., Clinton, Mo.  
 Smith, L. L., Blairstown, Mo., R. F. D. 22.  
 Streiby, U. G., Browington, Mo.  
 Taylor, C. D., Browington, Mo.  
 Wallis, J. R., Clinton, Mo.  
 Wilson, J. S., Deepwater, Mo.

## HOLT COUNTY.

Bullock, F. E., Forest City, Mo.  
 Chandler, J. F., Forest City, Mo.  
 Davis, J. M., Craig, Mo.  
 Davis, T. O., Maitland, Mo.  
 Evans, C. L., Oregon, Mo.  
 Gray, M. S., Craig, Mo.  
 Gregory, W. S., Forbes, Mo.  
 Kaltenbach, E., Craig, Mo.  
 Miller, E. E., Mound City, Mo.  
 Miller, E. M., Mound City, Mo.  
 Miller, J. W., Mound City, Mo.  
 Proud, W. C., Oregon, Mo.  
 Quigley, B. T., Mound City, Mo.  
 Simmons, B. B., Oregon, Mo.  
 Tracy, J. M., Mound City, Mo.  
 Tracy, J. C., Mound City, Mo.  
 Williams, Ira, Maitland, Mo.  
 Wood, W. S., Oregon, Mo.

## HOWARD COUNTY.

Bonham, Q. V., New Franklin, Mo.  
 Burgwin, A. B., Fayette, Mo.  
 Champion, J. R., Hildale, Mo.  
 Drake, C. F., Boonesboro, Mo.  
 Fleet, T. B., New Franklin, Mo.  
 Givens, H. K., Fayette, Mo.  
 Halsey, T. J., Franklin, Mo.  
 Hawkins, W. R., Glasgow, Mo.  
 Hume, J. G., Armstrong, Mo.  
 Jordan, J. V., New Franklin, Mo.  
 Lee, C. H., Fayette, Mo.  
 Lewis, C. O., Fayette, Mo.  
 McGee, C. P., Fayette, Mo.  
 McLee, C. P., Fayette, Mo.  
 Meyer, C. P., New Franklin, Mo.  
 Myers, C. P., Fayette, Mo.  
 Prichett, W. M., Glasgow, Mo.  
 Richards, F. C., Fayette, Mo.  
 Smith, Paul C., Fayette, Mo.  
 Smith, N. E., Fayette, Mo.  
 Thompson, W. O., Armstrong, Mo.  
 Watts, C. W., Fayette, Mo.  
 White, J. A., New Franklin, Mo.  
 Wood, J. E., Harrisburg, Mo.  
 Wright, U. S., Fayette, Mo.

## HOWELL COUNTY.

Culp, J. C., Thayer, Mo.  
 Bingham, J. W., Portersville, Mo.  
 Davis, J. C. B., Willow Springs, Mo.  
 Dixon, J. C. B., West Plains, Mo.  
 Elben, J. L., Alton, Mo.  
 Johnson, J. McB., West Plains, Mo.  
 Nichols, D. J., West Plains, Mo.  
 Piles, J. C., Alton, Mo.  
 Powell, D. T., Thayer, Mo.  
 Reiley, J. F., West Plains, Mo.



Rowe, H. J., Willow Springs, Mo.  
 Shuttee, H. C., West Plains, Mo.  
 Spears, R. S., West Plains, Mo.  
 Thompson, H. A., Lanton, Mo.  
 Thornburgh, A. H., West Plains, Mo.

IRON COUNTY.  
 No Report Received.

JACKSON COUNTY.

(All addresses are Kansas City unless otherwise stated).

Adams, Noah, 407 Argyle Bldg.  
 Albrittain, J. W., 24th & Holly.  
 Andersson, R. C., 716 Shukert Bldg.  
 Anderson, E., 915 W. 17th St.  
 Armour, Wallace A., 3505 E. Twelfth St.  
 Atkins, Calvin, Independence, Mo.  
 Ayres, Samuel, 1208 Wyandotte St.  
 Balsey, J. A., Santa Monica, Calif.  
 Beattie, Thos. J., 505 Shukert Bldg.  
 Beedle, G. A., 314 Altman Bldg.  
 Beil, J. W., 805 McGee St.  
 Bellows, G. E., 429 Rialto Bldg.  
 Berry, G. F., 501 Rialto Bldg.  
 Binnie, J. F., Twelfth & Wyandotte.  
 Blakesley, Theo, 100 Rialto Bldg.  
 Block, J., 419 Argyle Bldg.  
 Boswell, A. C., 2301 Summit St.  
 Bowman, Dora E., 327 Rialto Bldg.  
 Bowman, J. W., 402 Hall Bldg.  
 Brainard, B. F., Martin City, Mo.  
 Brewster, R. B., 422 Argyle Bldg.  
 Brown, Chas. A., 1113 E. 22nd.  
 Brown, Ralph J., 1304 E. 12th St.  
 Bruehl, J., 500 New Ridge Bldg.  
 Brunig, F. H., 3137 Main St.  
 Burke, G. L., 304 Deardorff St.  
 Burkhart, E. A., 2309 Summitt St.  
 Burroughs, A., 2317 College Ave.  
 Burnett, S. G., 425 Rialto Bldg.  
 Burrill, C. W., 623 Shukert Bldg.  
 Callaghan, R., Cambridge Ave.  
 Campbell, W. L., Fifteenth & Jackson.  
 Carbaugh, Eugene, 430 Rialto Bldg.  
 Carl, S. T., 350 Ridge Bldg.  
 Carver, H. N., 2805 E. 12th St.  
 Castelow, R. E., 13 Woodworth Ave.  
 Catheart, C. P., 419 Deardorff Bldg.  
 Chambers, J. Q., 709 Shukert Bldg.  
 Chambliss, E. L., 523 Rialto Bldg.  
 Child, Scott P., 705 Shukert Bldg.  
 Clausen, J. J., 2311 Summitt Bldg.  
 Coffey, W. H., 500 Bellefontaine.  
 Cook, F. L., Blue Springs, Mo.  
 Coleman, H. B., 3032 E. 18th St.  
 Cordier, A. H., 310 Rialto Bldg.  
 Cross, R. O., 317 Rialto Bldg.  
 Cross, W. M., 1005 Campbell St.  
 Crowder, W. H., 4647 Independence.  
 Cunningham, O. J., 306 Altman Bldg.  
 Curry, E. R., 304 Deardorff Bldg.  
 Curdy, R. J., 301 Keith & Perry Bldg.  
 Dailey, F. W., 327 Altman Bldg.  
 Dannaker, C. A., 537 Woodland Ave.  
 Davis, A. W., 3303 Woodland Ave.  
 Davis, G. W., 407 Century Bldg.  
 Davis, S. J. T., 304 Deardorff Bldg.  
 Dod, Frederick L., 4646 Troost Bldg.  
 Donaldson, G. H., 200 Westport Ave.  
 Donaldson, J. E., 200 Westport Ave.  
 Dove, O. H., 413 Rialto Bldg.  
 Drake, N. A., 1001 Harrison St.  
 Dunham, S. A., 1302 Garfield St.  
 Edmonson, M. M., 2440 Brooklyn Ave.  
 Eldredge, J. S., 1021 Grand Ave.  
 Evans, F. H., Fifth & Troost Ave.  
 Eubank, A. E., 3021 South West Bl.  
 Faïres, O. P., 1300 E. 8th St.  
 Farney, H. M., 2 Wabash Ave.  
 Fields, Tom, Eighteenth & Prospect Ave.  
 Field, W. S., 720 Shukert Bldg.  
 Florian, J. Albert, 920 Holmes St.  
 Foster, Hal, 402 Altman Bldg.  
 Foulson, John, 405 Argyle Bldg.  
 Frankenburger, J. M., 534 Rialto Bldg.  
 Freyman, A. A., 1201 Independence.  
 Freyman, J., 1201 Independence.  
 Frick, Wm., 301 Rialto Bldg.  
 Frick, W. J., 415 Keith & Perry Bldg.  
 Froehling, F. W., 920 Holmes St.  
 Fryer, B. E., 520 E. Ninth St.  
 Frye, A. G., 2342 Jackson Ave.  
 Fulton, A. L., 430 Deardorff Bldg.  
 Fulton, C. M., 534 Altman Bldg.  
 Gaines, J. W., 406 Rialto Bldg.  
 Gilmer, W. L., Mt. Washington.  
 Goffin, G. O., 436 New Ridge Bldg.  
 Goldman, Max, 309 Century Bldg.  
 Gosney, C. W., 718 Shukert Bldg.  
 Green, J. W., Independence, Mo.  
 Griffith, J. D., 522 Rialto Bldg.  
 Guffey, Don Carlos, 605 Bryant Bldg.  
 Hall, C. L., Bryant Bldg.  
 Hall, D. W., Bryant Bldg.  
 Hall, F. J., 288 Olive St.  
 Hall, J. R., 305 Altman Bldg.  
 Halley, George, Ridge Bldg.  
 Hamel, G. F., 706 West Tenth St.  
 Hamilton, H. D., 1806 E. Thirty-first St.  
 Hanawalt, H. O., 1214 Main St.  
 Hanna, M. A., 2711 Brooklyn St.  
 Hardin, C. B., Rialto Bldg.  
 Harrison, A. W., 23rd & Indiana Ave.  
 Harrison, A., Lees Summit, Mo.  
 Harrelson, N. O., Rialto Bldg.  
 Harrington, J. L., 1021 Grand Ave.  
 Harrison, E. Lee, 307 Husted Bldg.  
 Hashinger, G. H., Rialto Bldg.  
 Hays, H. C., 310 Century Bldg.  
 Hearst, Allen L., Merwin, Mo.  
 Henderson, J. P., 426 Argyle Bldg.  
 Henry, F. J., 2203 Brooklyn Ave.  
 Hertzler, A. E., 508 Altman Bldg.  
 Hetherington, E. M., Altman Bldg.  
 Hickerson, J. C., Independence Ave.  
 Hill, Howard, Rialto Bldg.  
 Holbrook, R. W., 224 Bryant Bldg.  
 Horigan, J. A., 3100 Main St.  
 Howard, J. W., 805 McGee St.  
 Hoxie, G. H., 317 Argyle Bldg.  
 Hyde, B. C., 404 Bryant Bldg.  
 Irwin, C. B., 426 Ridge Bldg.  
 Iuen, F. J., 1334 Grand Ave.  
 Iuen, W. C., 1334 Grand Ave.  
 Jacobs, Ben, Altman Bldg.  
 Jackson, C. A., 334 Rialto Bldg.  
 Jackson, J. N., Rialto Bldg.  
 James, S. C., Rialto Bldg.  
 Jennett, H. N., 4603 E. Ninth St.  
 Terowitz, H. D., 1283 Grand Ave.  
 Johnson, Chas. R., General Hosp. Bldg.  
 Johnstone, P. A., Shukert Bldg.  
 Jones, K. P., 1028 Walnut St.  
 Kanoky, J. P., 912 Walnut St.  
 Kelly, E. H., 2018 Prospect St.  
 Kepner, J. W., Cor. 15th & Olive St.  
 King, W. E., 512 Keith & Perry Bldg.  
 King, George, 400 Altman Bldg.  
 Kistler, J. R., 601 S. W. Blvd.  
 Kimberlin, J. W., 532 Altman Bldg.  
 Klien, W. G., Brunswick, Hotcl.  
 Knox, A. G., 322 Altman Bldg.  
 Kreeger, Geo. C., Lone Jack, Mo.  
 Krimminger, C. E., Independence, Mo.  
 Kuhn, W. F., Farmington, Mo.  
 Kuhn, H. P., Keith & Perry Bldg.  
 Kyger, J. W., 815 E. 31st St.  
 Lahmer, Ira B., 1336 Broadway.  
 Lake, N. E., Fourteenth & Summitt.  
 Lane, H. H., 800 S. W. Blvd.  
 Langsdale, J. M., Altman Bldg.  
 Laning, J. R., 623 Shukert Bldg.  
 Lapp, J. G., 203 Askew Bldg.  
 Lauranzana, Louis, Fifth & Cherry St.  
 Lee, R. H., S. E. Cor. 33rd & Penn.  
 Leverich, Leslie, Twelfth & Brooklyn Ave.  
 Leonard, H. O., 521 Shukert Bldg.  
 Leonard, W. H., 601 S. W. Blvd.  
 Lester, Chas. H., 601 Bryant Bldg.  
 Lewis, Ned O., Fourteenth & Grand Ave.  
 Lewis, J. K., 1212 Wyandotte Ave.  
 Lewis, N. P., 1219 Wyandotte St.  
 Lichtenberger, J. S., 1208 Wyandotte St.  
 Lieberman, B. A., 1107 McGee Ave.  
 Logan, J. E., 1229 Wyandotte Ave.  
 Look, H. H., 428 Altman Bldg.  
 Lowe, E. R., 2143 E. 8th St.  
 Lowrey, W. J., 402 Hall Bldg.  
 Lucas, Dale, Missouri Pacific Hospital.

Luscher, L. W., 12th & Grand Ave.  
 Lyle, H. M., 523 Altman Bldg.  
 Mallett, Eugene P., Twelfth & Wyandotte.  
 McAlester, A. W., 429 Argyle Bldg.  
 McArthur, A. W., 517 Shukert Bldg.  
 McBride, W. L., 503 Bryant Bldg.  
 McCall, H. B., 707 Shukert Bldg.  
 McCandless, O. H., 305 Altman Bldg.  
 McCrea, Maggie L., 526 Ridge Bldg.  
 McDonald, Chet, Rialto Bldg.  
 McDonald, P. L., 527 Rialto Bldg.  
 McKee, J. W., Rialto Bldg.  
 McKillip, O. L., 532 Altman Bldg.  
 McQuade, H. D., 210 Rialto Bldg.  
 McVey, Newton, Rialto Bldg.  
 Manko, E., Twelfth & Central.  
 Mann, A. W., Oak Grove, Mo.  
 Mark, E. O., 309 Argyle Bldg.  
 Martin, H. L., 601 Twelfth St.  
 Martin, J. C., 3026 W. 23rd St.  
 Merriman, C. S., 2511 Forest Ave.  
 Middleton, James, 412 N. Mongall Ave.  
 Miller, Abram, Rialto Bldg.  
 Miller, Hugh, 1021 Grand Ave.  
 Moennighoff, Fritz J., 324 Rialto Bldg.  
 Montgomery, W. E., Rialto Bldg.  
 Morris, W. C., 315 Garfield St.  
 Morrow, C. J., Bryant Bldg.  
 Morrow, W. F., Altman Bldg.  
 Mosher, Geo. G., 605 Bryant Bldg.  
 Mott, J. S., Rialto Bldg.  
 Murphy, F. E., Deardorff Bldg.  
 Neff, F. C., Altman Bldg.  
 Newhouse, Stanley, 452 Ridge Bldg.  
 Norberg, G. B., 526 Altman Bldg.  
 O'Connor, C., 815 McGee St.  
 O'Donnell, A., 327 Altman Bldg.  
 O'Flaherty, A. E., 2807 E. 33rd St.  
 Overall, T. W., 422 Rialto Bldg.  
 Owens, M. J., 603 S. W. Blvd.  
 Pearce, H. E., Rialto Bldg.  
 Parker, O. H., Twelfth & Central.  
 Perkins, J. W., Altman Bldg.  
 Pettijohn, N. J., 1310 Tracy Ave.  
 Phillips, E. T., 1019 Broadway.  
 Pickard, G. G., 903 E. 8th St.  
 Pickerill, C. W., 529 Rialto Bldg.  
 Pipkin, Geo. P., City Hall.  
 Pittman, J. Thomas, 1116 Broadway.  
 Porter, A. L., Rialto Bldg.  
 Porter, D. R., Tenth & Washington Ave.  
 Pugsley, Fred N., 425-7 Argyle Bldg.  
 Punton, John, Altman Bldg.  
 Ragan, Stephen A., Cor. 31st & Holmes St.  
 Ralston, J. H., 1800 W. Twenty-ninth St.  
 Randolph, Arthur G., 3303 Woodland Ave.  
 Rathbone, F. W., Rialto Bldg.  
 Ragsdale, T. J., Lees Summitt, Mo.  
 Reyling, F. T., 1004 Oak St.  
 Reed, W. M., Rialto Bldg.  
 Reynolds, W. T., 517 Shukert Bldg.  
 Rice, Wm., 402 Hall Bldg.  
 Richardson, K. B., Ridge Bldg.  
 Ritter, C. A., Altman Bldg.  
 Roberts, C. F., 720 Shukert Bldg.  
 Roberts, C. S., Lees Summitt, Mo.  
 Robertson, J. A., 705 Shukert Bldg.  
 Robinson, W. G., 415 Argyle Bldg.  
 Robinson, E. F., Bryant Bldg.  
 Robinson, J. L., Altman Bldg.  
 Rogers, J. C., Rialto Bldg.  
 Rosenwald, Leon, Rialto Bldg.  
 Russell, E. L., 805 Altman Bldg.  
 Sams, W. M., 806 Independence.  
 Sanders, F. L., 517 Shukert Bldg.  
 Sanders, St. Elmo, Rialto Bldg.  
 Sawyer, J. F., Fifth & Ledie Ave.  
 Schaffler, E. W., Deardorff Bldg.  
 Schaffler, R. M., Deardorff Bldg.  
 Schutz, W. H., 625 Bryant Bldg.  
 Scott, J. N., New Ridge Bldg.  
 Scott, Annie J., 507 New Ridge Bldg.  
 Sheldon, J. G., 405 Altman Bldg.  
 Shelley, O. C., Independence, Mo.  
 Shelton, W. A., 405 Argyle Bldg.  
 Sherer, J. W., 1208 Wyandotte Ave.  
 Shumate, D. L., 518 Shukert Bldg.  
 Singleton, J. M., 1105 E. 15th St.  
 Skinner, E. H., 212 Rialto Bldg.  
 Sloan, R. T., Rialto Bldg.  
 Smith, A. E., University Bldg.

Smith, R. M., 203 E. Twelfth St.  
 Stephens, N. A., 813 E. Thirty-first St.  
 St. Clair, R. L., 115 Hardesty Ave.  
 Stevens, W. W., Greenwood, Mo.  
 Stewart, E. L., 521 Shukert Bldg.  
 Streett, St. Clair, 123 W. Twelfth St.  
 Strother, J. S., 415 Keith & Perry Bldg.  
 Swaney, Loren, Hickman Mills, Mo.  
 Swaney, A. C., Lees Summitt, Mo.  
 Switzer, Clyde, Cor. 12th & Troost.  
 Talbot, Ambrose, Rialto Bldg.  
 Taylor, L. G., 720 Woodland Ave.  
 Tesson, N. A. G., 332 Shukert Bldg.  
 Thomas, A. W., Springfield, Mo.  
 Thompson, James, Rialto Bldg.  
 Thompson, J. H., Deardorff Bldg.  
 Thornton, T. R., Lees Summitt, Mo.  
 Thrailkill, E. H., Rialto Bldg.  
 Tiffany, F. B., 805 McGee St.  
 Tieman, T. G., 603 Sw. Boul.  
 Trimble, W. K., 3444 Prospect Ave.  
 Tureman, H. G., 702 Bryant Bldg.  
 Twyman, G. T., Independence, Mo.  
 Van Eman, F. T., 415 Argyle Bldg.  
 VonGuast, E., 310 Century Bldg.  
 Voegelin, S., 436 New Ridge Bldg.  
 Wall, A. H., 3839 Independence.  
 Watson, B. F., Rialto Bldg.  
 Weyer, I. S., 503 Bryant Bldg.  
 Weiss, F. H., 415 Deardorff Bldg.  
 Wedding, E. V., 2122 E. 15th St.  
 Welch, A. J., 434 Rialto Bldg.  
 Wheeler, B. H., 422 Deardorff Bldg.  
 Wheeler, W. S., 205 E. 12th St.  
 Wherritt, H. P., Independence, Mo.  
 Willits, W. C., 311 Argyle Bldg.  
 Wilson, A. M., 906 Main St.  
 Wilson, C. E., 415 Keith & Perry Bldg.  
 Wilson, Dora G., 1008 Locust St.  
 Wilson, John, 720 Shukert Bldg.  
 Wolf, I. J., 408 Argyle Bldg.  
 Wood, N. P., Independence, Mo.  
 Woolley, Paul V., 309 Argyle, Bldg.  
 Wyatt, T. E., 3215 Olive St.  
 Zwart, B. H., 1019 Prospect St.

## JASPER COUNTY.

Anderson, F. L., Joplin, Mo.  
 Barnett, A. F., Joplin, Mo.  
 Balsley, M. T., Joplin, Mo.  
 Baird, E. H., Webb City, Mo.  
 Blackwell, Z. T., Joplin, Mo.  
 Bragdon, G. H., Reeds, Mo.  
 Chenoweth, L. C., Webb City, Mo.  
 Clark, A. B., Joplin, Mo.  
 Clark, J. W., Cartersville, Mo.  
 Cook, L. C., Webb City, Mo.  
 Cummings, C. C., Joplin, Mo.  
 Donohoo, P., Joplin, Mo.  
 Dumbauld, B. A., Cartersville, Mo.  
 Freeman, A. B., Joplin, Mo.  
 Grantham, S. A., Joplin, Mo.  
 Hass, H. R., Joplin, Mo.  
 Hall, Elizabeth, Carthage, Mo.  
 James, R. M., Joplin, Mo.  
 Kelso, R. S., Joplin, Mo.  
 Ketcham, M. C., Carthage, Mo.  
 Kincheloe, M. B., Joplin, Mo.  
 Korn, A. L., Carthage, Mo.  
 Lanyon, W. H., Joplin, Mo.  
 Long, J. S., Joplin, Mo.  
 Mallor, W. H., Joplin, Mo.  
 Matthews, L. L., Joplin, Mo.  
 Mays, G. L., Joplin, Mo.  
 McClure, G. W., Cartersville, Mo.  
 McMichael, A. O., Joplin, Mo.  
 Miller, G. W., Joplin, Mo.  
 Miller, S. H., Joplin, Mo.  
 Neff, R. L., Joplin, Mo.  
 Pifer, J. D., Joplin, Mo.  
 Powers, Everett, Carthage, Mo.  
 Powers, H. C., Chitwood, Mo.  
 Rohan, F. E., Joplin, Mo.  
 Sanz, George, Webb City, Mo.  
 Shelton, M. C., Joplin, Mo.  
 Snyder, A. R., Joplin, Mo.  
 Spriggs, M. L., Joplin, Mo.  
 Steele, W. E., Carthage, Mo.  
 Taylor, H. H., Joplin, Mo.  
 William, W. J., Joplin, Mo.  
 Winchester, J. M., Joplin, Mo.  
 Wolfe, B. F., Carthage, Mo., R.F.D.No.1.

## JEFFERSON COUNTY.

Bryan, G. G., De Soto, Mo.  
 Donnell, J. T., Festus, Mo.  
 Donnell, R. E., De Soto, Mo.  
 Farrar, W. H., De Soto, Mo.  
 Hamel, A. H., De Soto, Mo.  
 Harris, C. G., Festus, Mo.  
 Hauck, S. W., Kimmswick, Mo.  
 Kirk, J. F. W., Kimmswick, Mo.  
 MacNutt, I. N., Pevely, Mo.  
 Rutledge, J. E., Festus, Mo.  
 Tidwell, G. W., De Soto, Mo.

## JOHNSON COUNTY.

Aber, W. H., Montserrat, Mo.  
 Adcock, D. C., Warrensburg, Mo.  
 Adcock, J. A. B., Warrensburg, Mo.  
 Anderson, J. I., Warrensburg, Mo.  
 Anderson, John T., Warrensburg, Mo., R.F.D.  
 Bozarth, John R., Centerview, Mo.  
 Bradley, T. L., Warrensburg, Mo.  
 Case, Z., Warrensburg, Mo.  
 Gilbert, E. H., Warrensburg, Mo.  
 Graves, E. A., Kingsville, Mo.  
 Hall, O. B., Warrensburg, Mo.  
 Howard, T. S., Chilhowee, Mo.  
 Johnson, W. E., Warrensburg, Mo.  
 Martin, W. L., Chilhowee, Mo.  
 Murray, L. F., Holden, Mo.  
 Ozias, C. O., Warrensburg, Mo.  
 Pare, E. G., Leeton, Mo.  
 Park, Henry, Dunkburg, Mo.  
 Porter, J. E., Knobnoster, Mo.  
 Raines, N. J., Knobnoster, Mo.  
 Rice, J. M., Columbus, Mo.  
 Schofield, L. J., Warrensburg, Mo.  
 Schooley, R. C., Robbins, Mo.  
 Shy, M. P., Knobnoster, Mo.  
 Simpson, J. T., Holden, Mo.  
 Tilton, A. L., Truxton, Arizona.  
 Zoll, F. C., Warrensburg, Mo.

## KNOX COUNTY.

Brown, L. S., Edina, Mo.  
 Haden, J. W., Pleona, Mo.  
 Humphrey, B. F., Hurdland, Mo.  
 Humphrey, H., Locust Hill, Mo.  
 Jurgens, H. J., Edina, Mo.  
 McReynolds, U. R., Knox City, Mo.  
 Morris, W. J., Edina, Mo.  
 Pierce, Don, Newark, Mo.  
 Wilsey, A. R., Hurdland, Mo.

## LACLEDE COUNTY.

Barker, J. C., Russ, Mo.  
 Billings, J. M., Lebanon, Mo.  
 Herbert, T. B., Lebanon, Mo.  
 Jacobs, J. C., Conway, Mo.  
 Lindsey, J. W., Orla, Mo.  
 Lockwood, W. A., Conway, Mo.  
 McComb, Al., Lebanon, Mo.  
 McComb, Jas., Lebanon, Mo.  
 Pinckard, J. A., Lebanon, Mo.  
 Standard, D. E., Lebanon, Mo.

## LAFAYETTE COUNTY.

Barclay, R. D., Odessa, Mo.  
 Braecklein, W. A., Higginsville, Mo.  
 Carter, R. C., Higginsville, Mo.  
 Carthrae, Lewis, Cordee, Mo.  
 Cope, J. Q., Lexington, Mo.  
 Fulkerson, J. J., Lexington, Mo.  
 Gaines, E. F., Bates City, Mo.  
 Harwood, W. G., Dover, Mo.  
 Lieser, F. D., Concordia, Mo.  
 Lissack, H. M., Lexington, Mo.  
 McLennan, Higginsville, Mo.  
 Mann, J. A., Wellington, Mo.  
 Mann, F. W., Wellington, Mo.  
 McGinnis, F., Higginsville, Mo.  
 Nickell, C. A., Mayview, Mo.  
 Ott, W. C., Higginsville, Mo.  
 Payne, N. B., Lexington, Mo.  
 Parkhurst, C. L., Odessa, Mo.  
 Perrie, J., Mayview, Mo.  
 Roberts, M. G., Lexington, Mo.

Ryland, C. T., Lexington, Mo.  
 Schreiman, F., Concordia, Mo.  
 Schneider, J. A., Concordia, Mo.  
 Tucker, J. E., Lexington, Mo.  
 Watts, R. D., Napoleon, Mo.  
 Webb, W. C., Higginsville, Mo.  
 Williams, H., Odessa, Mo.  
 Williams, G., Odessa, Mo.

## LAWRENCE-STONE COUNTY.

Andrew, J. P., Marionville, Mo.  
 Baird, Jesse P., Marionville, Mo.  
 Clark, H. Ross, Pierce City, Mo.  
 Cottingham, A., Aurora, Mo.  
 Craven, J. H., Marionville, Mo.  
 Doggett, C. R., Crane, Mo.  
 Flemming, J. B., Aurora, Mo.  
 Freeland, P. D., Pierce City, Mo.  
 Goodrich, E. E., Crane, Mo.  
 Gum, L. J., Stinson, Mo.  
 Harding, D. E., Aurora, Mo.  
 Harris, J. A., Mt. Vernon, Mo.  
 Hoffman, D. M., Crane, Mo.  
 McCall, T. D. S., Marionville, Mo.  
 Madry, A. H., Aurora, Mo.  
 Melton, J. A., Aurora, Mo.  
 Miller, Thos. D., Aurora, Mo.  
 Moore, C. A., Aurora, Mo.  
 Painter, J. M., Mt. Vernon, Mo.  
 Rice, Marion, Stotts City, Mo.  
 Rodman, W. W., Pierce City, Mo.  
 Shumate, L. St. Clair, Reed Springs, Mo.  
 Smart, W. R., Crane, Mo.  
 Stevenson, F. S., Aurora, Mo.  
 Wade, E. E., School, Mo.

## LEWIS COUNTY.

Brown, J. C., Lewiston, Mo.  
 Cole, Paul F., Steffenville, Mo.  
 Dunlap, H. E., Canton, Mo.  
 Ellery, William, La Grange, Mo.  
 Ellery, Wm. L., La Grange, Mo.  
 Frame, C. N., Ewing, Mo.  
 Frame, J. P., Ewing, Mo.  
 Ford, John M., Williamstown, Mo.  
 Knight, G. P., Benjamin, Mo.  
 McCutchan, G. L., Canton, Mo.  
 McGlasson, T. F., Lewistown, Mo.  
 McKim, H. W., LaBelle, Mo.  
 Marchland, J. B., Monticello, Mo.  
 Owens, N. O., La Grange, Mo.  
 Perry, A. A., Williamstown, Mo.  
 Raines, J. D., Maywood, Mo.  
 Rebo, W. A., Canton, Mo.  
 Schofield, R. B., Lewistown, Mo.  
 Shanks, C. O., Canton, Mo.  
 Simpson, W. B., LaBelle, Mo.  
 Sullivan, G. M., Lewistown, Mo.  
 Thomlin, G. F., Williamstown, Mo.  
 Tompkins, Junius, Canton, Mo.  
 Wilson, R. E., LaBelle, Mo.  
 Wiseman, T. P., Monticello, Mo.

## LINCOLN COUNTY.

Avery, C., Troy, Mo.  
 Beatty, J. D., Troy, Mo.  
 Bailey, S. M., Elsberry, Mo.  
 Diggs, J., Hawkpoint, Mo.  
 Duwelins, L. H., Briscoe, Mo.  
 Hicks, E. A., Old Monroe, Mo.  
 Kieling, F. V., Elsberry, Mo.  
 Knox, J. A., Whiteside, Mo.  
 McKay, S. R., Troy, Mo.  
 Pendleton, L., Troy, Mo.  
 Powell, C. E., Elsberry, Mo.  
 Prewitt, G. E., Hawkpoint, Mo.  
 Smith, W. P., Troy, Mo.  
 Stanley, E. L., Winfield, Mo.  
 Strickland, J., Moscow Mills, Mo.  
 Stuckert, Otto, Whiteside, Mo.

## LINN COUNTY.

Buck, U. G., Rothville, Mo.  
 Burke, F. W., Laclede, Mo.  
 Burke, J. L., Laclede, Mo.  
 Carlyl, L. P., Brookfield, Mo.



Cochran, F. B., Brookfield, Mo.  
 Dryden, U. G., Purden, Mo.  
 Ellis, W. W., Marceline, Mo.  
 Epperson, H. E., Browning, Mo.  
 Eurc, J. B., Brookfield, Mo.  
 Fore, T. P., Brookfield, Mo.  
 Frazier, Leland, Marceline, Mo.  
 Haley, A., Brookfield, Mo.  
 Howard, D. F., Brookfield, Mo.  
 Jenkins, C. E., Brookfield, Mo.  
 Johnson, H. C., Meadville, Mo.  
 Lanc, J. W., Linneus, Mo.  
 Mairs, J. A., Browning, Mo.  
 Mason, J. W., Brookfield, Mo.  
 Morris, Robt. H., Linneus, Mo.  
 Musgrove, W. H., Eversonville, Mo.  
 Owen, T. P., Brookfield, Mo.  
 Patrick, P. L., Bucklin, Mo.  
 Polson, J. T., Laclede, Mo.  
 Pratt, H. H., Brookfield, Mo.  
 Putnam, B. B., Marceline, Mo.  
 Putnam, Ola, Marceline, Mo.  
 Riding, O. H., Meadville, Mo.  
 Scott, W. B., Bucklin, Mo.  
 Shepherd, J. D., Meadville, Mo.  
 Standly, Kathryn V., Brookfield, Mo.  
 Standly, E. D., Linneus, Mo.  
 Stanley, Z. T., Laclede, Mo.  
 Stratton, C. D., Rothville, Mo.  
 Thompson, J. M., Meadville, Mo.  
 Trippier, Bert, Browning, Mo.  
 Whaley, R. W., Browning, Mo.

## LIVINGSTON COUNTY.

Alexander, G. W., Chula, Mo.  
 Batdorff, F. P., Farmersville, Mo.  
 Barney, R., Chillicothe, Mo.  
 Beeman, S. M., Chillicothe, Mo.  
 Chaffin, R. E., Belton, Mo.  
 Girdner, Wm. M., Chillicothe, Mo.  
 Gordon, David, Chillicothe, Mo.  
 Grace, H. M., Chillicothe, Mo.  
 Houf, W., Farmersville, Mo.  
 Ogan, E. F., Chula, Mo.  
 Patton, C. W., Sampsel, Mo.  
 Shelton, J. C., Chillicothe, Mo.  
 Simpson, A. J., Chillicothe, Mo.  
 Simpson, W. R., Chillicothe, Mo.  
 Stevens, B. N., Chillicothe, Mo.  
 Tracy, L. E., Chillicothe, Mo.  
 White, W. L., Springhill, Mo.  
 Wooden, I. M., Dawn, Mo.

## MACON COUNTY.

Bradley, W. E., Ethel, Mo.  
 Bunch, B. F., Bloomington, Mo.  
 Campbell, J. F., Laplata, Mo.  
 Hogg, Garrett, Ardmore, Mo.  
 Mason, L. O., Bevier, Mo.  
 Miller, A. B., Macon, Mo.  
 Miller, W. H., Macon, Mo.  
 Norris, T. J., Macon, Mo.  
 Pipkin, W. D., Excello, Mo.  
 Raines, A. M., Tenmile, Mo.  
 Reagan, C. W., Macon, Mo.  
 Rowland, W. P., Bevier, Mo.  
 Salyer, C. E., Callao, Mo.  
 Smith, C. W., Keota, Mo.  
 Smith, E. S., Macon, Mo.  
 Thompson, L. M., Macon, Mo.  
 Watson, T. S., Bevier, Mo.  
 White, M. S., Roanoke, Mo.

## MADISON COUNTY.

Anthony C. A., Fredericktown, Mo.  
 Barron, W. H., Mine La Motte, Mo.  
 Carr, G. M., Marquand, Mo.  
 Cozzen, E. P., Fredericktown, Mo.  
 Davis, C. U., Fredericktown, Mo.  
 Dines, G. L., Mine La Motte, Mo.  
 Gale, F. W., Marquand, Mo.  
 Greenwood, G. W., Fredericktown, Mo.  
 Haley, O., Fredericktown, Mo.  
 Newberry, F. R., Fredericktown, Mo.  
 Slaughter, S. C., Fredericktown, Mo.  
 Smith, J. K., Fredericktown, Mo.

## MARION COUNTY.

Banks, H. L., Hannibal, Mo.  
 Baskett, J. N., Hannibal, Mo.  
 Blue, A. B., Hannibal, Mo.  
 Bourn, J. J., Hannibal, Mo.  
 Bounds, E. H., Hannibal, Mo.  
 Bush, F. W., Hannibal, Mo., R. F. D.  
 Chilton, J. C., Hannibal, Mo.  
 Chowning, Thos., Hannibal, Mo.  
 Detweiler, A. J., Hannibal, Mo.  
 Farrell, J. J., Hannibal, Mo.  
 Ferrell, Chas. A., Hannibal, Mo.  
 Glahn, C. P., Palmyra, Mo.  
 Goodier, Robt. H., Hannibal, Mo.  
 Guss, W. C., Hannibal, Mo.  
 Hays, W. H., Hannibal, Mo.  
 Hornback, E. T., Hannibal, Mo.  
 Howell, J. S., Hannibal, Mo.  
 Jaudon, B. J., Palmyra, Mo.  
 Paxon, E. C., Hannibal, Mo.  
 Primm, J. N., Hannibal, Mo.  
 Reid, J., Hannibal, Mo.  
 Rosell, T. A., Palmyra, Mo.  
 Schmidt, R., Hannibal, Mo.  
 Shanks, A. L., Hannibal, Mo.  
 Smith, S. G., Hannibal, Mo.  
 Smith, U. S., Hannibal, Mo.  
 Vandiver, C. E., Hannibal, Mo.  
 Waldo, E. E., Hannibal, Mo.

## MCDONALD COUNTY.

No Report Received.

## MERCER COUNTY.

Bristow, G. M., Princeton, Mo.  
 Buren, C. R., Princeton, Mo.  
 Ewing, Ed. W., Spickards, Mo.  
 Nally, H., Cainsville, Mo.  
 Oyler, H. W., Mill Grove, Mo.  
 Perry, J. M., Princeton, Mo.  
 Pickett, C. F., Mercer, Mo.  
 Powell, B. S., Mercer, Mo.  
 Stacey, E. W., Princeton, Mo.

## MILLER COUNTY.

Allee, W. L., Eldon, Mo.  
 Bennage, J. L., Olean, Mo.  
 Van Grep, W. A., Iberia, Mo.

## MISSISSIPPI COUNTY.

Chapman, A. W., Charleston, Mo.  
 Finley, I. L., Anniston, Mo.  
 Lynch, J. W., Charleston, Mo.  
 Reid, H. L., Charleston, Mo.  
 Vernon, F. S., Farmington, Mo.  
 Wallace, G. R., Bertrand, Mo.  
 Willis A., Birds Point, Mo.

## MONITEAU COUNTY.

Allee, E. M., California, Mo.  
 Bramel, H. W., McGirk, Mo.  
 Burke, J. P., California, Mo.  
 Crum, J. A., Marion, Mo.  
 Dearing, W. A., Jamestown, Mo.  
 Freudenberger, H., Clarksburg, Mo.  
 Gray, L. M., California, Mo.  
 Houser, F. W., California, Mo.  
 Hunter, W. B., Fortuna, Mo.  
 Inglish, J. E., Bacon, Mo.  
 Klueber, H. C., California, Mo.  
 Lang, J. W., Centertown, Mo.  
 Latham, H. W., Latham, Mo.  
 Latham, L. L., Latham, Mo.  
 Marsh, J. W., Tipton, Mo.  
 Norman, J. B., California, Mo.  
 Patterson, W. R., Tipton, Mo.  
 Popejoy, H. R., High Point, Mo.  
 Redmon, S. H., Tipton, Mo.  
 Robertson, J. M., Buncheon, Mo.  
 Stewart, J. B., Clarksburg, Mo.  
 Thorpe, A. V., Jamestown, Mo.  
 Wilson, G. S., Fortuna, Mo.

## MORGAN COUNTY.

Gunn, N. J., Versailles, Mo.  
 Hatter, W. L., Barnett, Mo.

Lutman, H. N., Versailles, Mo.  
Short, J. L., Versailles, Mo.  
Well, Wm., Versailles, Mo.  
Woods, P. G., Versailles, Mo.

MONROE COUNTY.

Baker, Chas., Sante Fe, Mo.  
Bell, W. T., Stoutville, Mo.  
Brown, S. M., Monroe City, Mo.  
Brown, J. E., Florida, Mo.  
Carver, F. S., Madison, Mo.  
Cassity, G. H., Tulip, Mo.  
Dixon, C. H., Holliday, Mo.  
Duncan, Edward, Long Branch, Mo.  
Ely, A. W., Monroe City, Mo.  
Furnish, J. A., Granville, Mo.  
Hull, J. R., Monroe City, Mo.  
Johnson, G. A., Holliday, Mo.  
Lensley, M. E., Madison, Mo.  
Lloyd, T. B., Paris, Mo.  
McMurray, M. C., Paris, Mo.  
McNutt, W. B. A., Monroe City, Mo.  
Moss, F. M., Paris, Mo.  
Payne, H. G., Paris, Mo.  
Shobe, H. C., Paris, Mo.  
Sweeney, John L., Monroe City, Mo.

NEW MADRID COUNTY.

No Report Received.

NEWTON COUNTY.

Benton, A. W., Neosho, Mo.  
Bowers, H., Neosho, Mo.  
Bridges, J. M., Tipton Ford, Mo.  
Brown, W. D., Newtonia, Mo.  
Campbell, William, Seneca, Mo.  
Chapman, U. S., Diamond, Mo.  
Cravens, W. A., Granby, Mo.  
Doty, E. G., Anderson, Mo.  
Foster, H. F., Neosho, Mo.  
Hancock, J. B., Newtonia, Mo.  
Harrison, G. W., Newtonia, Mo.  
Hodges, J. J., Granby, Mo.  
Lamson, J. W., Neosho, Mo.  
Lamson, R. C., Neosho, Mo.  
Langley, J. W., Granby, Mo.  
Maas, A., Neosho, Mo.  
Porter, H. L., Seneca, Mo.  
Roseberry, E. M., Neosho, Mo.  
Vancleave, C. T., Neosho, Mo.  
Weems, D. L., Neosho, Mo.  
Wills, R. L., Neosho, Mo.

NODAWAY COUNTY.

Allen, A. B., Maryville, Mo.  
Anthony, F. R., Maryville, Mo.  
Barnett, A. D., Guilford, Mo.  
Bradbury, R. M., Maryville, Mo.  
Carter, Marcus, Burlington Junction, Mo.  
Crowson, E. L., Pickering, Mo.  
Crowson, Egbert, Gaynor City, Mo.  
Cummins, K. C., Maryville, Mo.  
Day, Hiram, Parnell, Mo.  
Dean, C. G., Burlington Junction, Mo.  
Dean, J. W., Maryville, Mo.  
Dean, L. E., Maryville, Mo.  
Donnell, H. S., Clearmont, Mo.  
Gaugh, M. A., Burlington Junction, Mo.  
Goodson, H. C., Hopkins, Mo.  
Heryford, W. B., Pickering, Mo.  
Howell, C. F., Bedison, Mo.  
Hunterson, D. J., Parnell, Mo.  
Johns, Comer, Wilcox, Mo.  
Kirk, C. W., Hopkins, Mo.  
Koch, C. D., Maryville, Mo.  
Large, S. D., Honkins, Mo.  
Larrabee, J. A., Barnard, Mo.  
Malzahn, E. T., Ravenwood, Mo.  
Lee, F. A., Skidmore, Mo.  
McClanahan, G. N., Guilford, Mo.  
Nash, G. A., Maryville, Mo.  
Pierpoint, J. E., Skidmore, Mo.  
Pollard, D. A., Barnard, Mo.  
Pollard, M. M., Barnard, Mo.  
Robinson, J. B., Quitman, Mo.  
Ryan, F. M., Quitman, Mo.

Sargent, D. A., Hopkins, Mo.  
Sayler, H. L., Elmo, Mo.  
Smith, D. G., Arkoe, Mo.  
Stuckle, W. P., Clyde, Mo.  
Todd, J. H., Maryville, Mo.  
Wallis, W. M., Maryville, Mo.  
Wallis, F. C., Maryville, Mo.

PEMISCOT COUNTY.

No Report Received.

PERRY COUNTY.

No Report Received.

PETTIS COUNTY.

(All addresses are Sedalia, Mo., unless otherwise stated.)

Bishop, W. T., Hughesville, Mo.  
Bohling, C., Fifth and Ohio.  
Campbell, A. J., 301 Ohio.  
Cartwright, C. C., Sedalia, Mo.  
Clabaugh, O. W., Greenridge, Mo.  
Cole, H. B., 501 S. Engineer.  
Collins, M. T., 219 Ilgenfritz Bldg.  
Cowan, W. G., 504 S. Ohio.  
Crawell, J. D., Longwood, Mo.  
Dunlap, W. O., 108 West Main St.  
Dyer, David P., Dresden, Mo.  
Ferguson, Leslie, Greenridge, Mo.  
Ferguson, W. J., 321 Ohio.  
Harris, W. B., Georgetown, Mo.  
Hubbard, J. D., Versailles, Mo.  
Kelly, Sam., Ilgenfritz Bldg.  
Knott, Minerva, E. 7th St.  
Love, J. G., State Hosp., Nevada, Mo.  
McNeil, C. A., M. K. & T. Hospital.  
McNeil, G. E., M. K. & T. Hospital.  
Morley, F. R., 1103 E. 5th St.  
Overstreet, W. C., 312 S. Ohio.  
Sands, M. L., Cole Camp, Mo.  
Simonds, Wallace, 418 S. Ohio.  
Sutton, F. L., Hoffman Bldg.  
Shirk, W. S., Hoffman Bldg.  
Titworth, G., 508 S. Ohio St.  
Tucker, A. J., 401 S. Ohio.  
Wood, E. A., Hoffman Bldg.  
Yancey, E. F., M. K. & T. Hospital.

PHELPS COUNTY.

Baysinger, S. L., Rolla, Mo.  
Breuer, W. H., St. James, Mo.  
Burns, W. F., Newburg, Mo.  
Cowan, R. B., Edgar Springs, Mo.  
Fulbright, C. H., St. James, Mo.  
Johnson, R. L., Rolla, Mo.  
Matlock, L. J., St. James, Mo.  
Rowe, S. B., Rolla, Mo.  
Short, M. J., Rolla, Mo.  
Smith, B. T., Newburg, Mo.  
Smith, W. S., Rolla, Mo.

PIKE COUNTY.

Bankhead, C. L., Paynesville, Mo.  
Bankhead, J. E., Clarksville, Mo.  
Barnett, D. E., New Hartford, Mo.  
Bartlett, E. M., Clarksville, Mo.  
Bartlett, J. M., Clarksville, Mo.  
Biggs, M. O., Bowling Green, Mo.  
Byrns, R. W., Frankford, Mo.  
Davis, J. D., Louisiana, Mo.  
Dreyfus, J. W., Louisiana, Mo.  
Hardin, Rufus, Louisiana, Mo.  
Hereford, R. G., Louisiana, Mo.  
Hetherlin, T. Guy, Louisiana, Mo.  
Kennedy, J. J., Louisiana, Mo.  
Pearson, D. M., Louisiana, Mo.  
Pollard, W. H., Eolia, Mo.  
Smith, C. A., Annada, Mo.  
Treadway, W. W., Turpin, Mo.  
Unsell, J. B., Eolia, Mo.  
Walters, W. T., Bowling Green, Mo.

PLATTE COUNTY.

Benham, C. E., Parkville, Mo.  
Chastain, C. H., Weston, Mo.

Clark, H. M., Platte City, Mo.  
 Coffey, G. C., Platte City, Mo.  
 Cowan, Lee, Latan, Mo.  
 Dinwiddie, F. G., Camden Point, Mo.  
 Gardner, P. L., Waldron, Mo.  
 Hale, J. M., Dearborn, Mo.  
 Herndon, A. S., Camden Point, Mo.  
 Mizener, J. L., Edgerton, Mo.  
 Moore, M. H., Dearborn, Mo.  
 Naylor, Alva., Platte City, Mo.  
 Patterson, H. H., Edgerton, Mo.  
 Redman, Spencer, Platte City, Mo.  
 Shafer, F. M., Edgerton, Mo.  
 Shultz, J. W., Weston, Mo.  
 Smith, A. S. J., Dearborn, Mo.  
 Swaney, W. D., Linkville, Mo.  
 Underwood, J., Parkville, Mo.  
 Wilson, R. P. C., Platte City, Mo.  
 Winter, J. H., Parkville, Mo.  
 Yocum, G. D., Parkville, Mo.

## POLK COUNTY.

Brown, Chas. H., Fair Play, Mo.  
 Cousins, S. W., Morris, Mo.  
 Hopkins, W. S., Bolivar, Mo.  
 Loafman, J. E., Bolivar, Mo.  
 Mitchell, A. P., Bolivar, Mo.  
 Myers, W. T., Aldrich, Mo.

## PULASKI COUNTY.

No Report Received.

## PUTMAN COUNTY.

Carrier, C. H., Hartford, Mo.  
 Cozad, F. A., Powerville, Mo.  
 Geisinger, E. J., Unionville, Mo.  
 Gray, L. L., St. John, Mo.  
 Haynes, Lee, Mendota, Mo.  
 Holman, J. H., Unionville, Mo.  
 McCutchen, J. E., Lemonsville, Mo.  
 Montgomery, E. A., Unionville, Mo.  
 Noel, I. F., Unionville, Mo.  
 Nulton, Ida Mary, Livonia, Mo.  
 Rice, F. D., Lucerne, Mo.  
 St. John, R. L., Howland, Mo.  
 Thomas, C. O., Worthington, Mo.  
 Townsend, J. A., Unionville, Mo.

## RALLS COUNTY.

Birney, W. L., Oakwood, Mo.  
 Downing, T. J., New London, Mo.  
 Graves, C. H., Center, Mo.  
 Hendrix, W. G., New London, Mo.  
 Harwood, W. S., Rensselaar, Mo.  
 Monroe, Thomas, Center, Mo.  
 McCullon, R. W., Center, Mo.  
 Ragen, Sam., New London, Mo.  
 Walter, Fred., Perry, Mo.  
 Waters, W. T., New London, Mo.  
 Wix, F. M., Center, Mo.  
 Winn, M., Ilasco, Mo.

## RANDOLPH COUNTY.

Ash, O. O., Moberly, Mo.  
 Barnhart, D. A., Huntsville, Mo.  
 Bragg, G. G., Huntsville, Mo.  
 Cattingham, T. A., Moberly, Mo.  
 Cuppaidge, G. O., Moberly, Mo.  
 Dinwiddie, T. H., Higbee, Mo.  
 Dutton, C. K., Moberly, Mo.  
 Lowery, J. A., Clifton Hill, Mo.  
 Mangus, T. D., Moberly, Mo.  
 Mitchell, R. A., Clark, Mo.  
 Selby, W. M., Moberly, Mo.  
 Terrill, W. R., Clifton Hill, Mo.  
 Taylor, J. W., Huntsville, Mo.  
 Towles, S. P., Jacksonville, Mo.

## RAY COUNTY.

Clark, J. F., Rayville, Mo.  
 Cook, T. B., Rayville, Mo.  
 Estill, W. G., Lawson, Mo.  
 Greene, L. D., Richmond, Mo.  
 Hamilton, R. L., Richmond, Mo.  
 McCaugh, E. T., Richmond, Mo.  
 Magor, H., Hardin, Mo.

Mussen, E. H., Norborne, Mo.  
 Rentfro, E. W., Rayville, Mo.  
 Sevier, Robert, Richmond, Mo.  
 Shotwell, C. B., Richmond, Mo.  
 Smith, James W., Richmond, Mo.  
 Sheets, R., Orrick, Mo.  
 Todd, W. G., Lawson, Mo.

## REYNOLDS COUNTY.

No Report Received.

## RIPLEY COUNTY.

No Report Received.

## ST. CHARLES COUNTY.

Baltzer, H. F. W., Cottleville, Mo.  
 Bitter, Carl, St. Charles, Mo.  
 Bruere, John E., St. Charles, Mo.  
 Edwards, J. C., O'Fallon, Mo.  
 Gossow, A. A., St. Charles, Mo.  
 Hardin, Thomas Lee, Defiance, Mo.  
 Jackson, T. J., St. Charles, Mo.  
 Kraft, A. J., Augusta, Mo.  
 Morgner, Omar, St. Charles, Mo.  
 Mudd, J. R., St. Charles, Mo.  
 Reid, James, Wentzville, Mo.  
 Richoff, H. J., Augusta, Mo.  
 Stumberg, B. Kurt, St. Charles, Mo.  
 Tainter, F. J., St. Charles, Mo.  
 Wentker, B. P., St. Charles, Mo.  
 Wiegers, T. L., Flint Hill, Mo.

## ST. CLAIR COUNTY.

Bell, W. E., Osceola, Mo.  
 Cline, W., Appleton City, Mo.  
 Mason, W. J., Weaubleau, Mo.  
 Moorehouse, Emma, Appleton City, Mo.  
 Seevers, John, Osceola, Mo.  
 Seevers, Ruth, Osceola, Mo.  
 Smith, E. J., Appleton City, Mo.  
 Stratton, L. S., Roscoe, Mo.  
 Sullivan, E. W., Osceola, Mo.  
 Williams, D. B., Osceola, Mo.

## ST. FRANCOIS COUNTY.

Appleberg, R., Leadwood, Mo.  
 English, J. H., Farmington, Mo.  
 Evans, A. L., Bonne Terre, Mo.  
 Fleming, C. R., Farmington, Mo.  
 Haw, J. L., Farmington, Mo.  
 Lister, R. B., Desloge, Mo.  
 McCormick, E. C., Farmington, Mo.  
 McEwen, G. A., Farmington, Mo.  
 McKenzie, D. H., Leadwood, Mo.  
 Reece, W. C., Elvins, Mo.  
 Williams, G. B., Flat River, Mo.

## STE. GENEVIEVE COUNTY.

Hertich, C. J., Ste. Genevieve, Mo.  
 Hinch, F. E., Ste. Genevieve, Mo.  
 Jarvis, N. W., Bloomdale, Mo.  
 Lanning, R. W., Ste. Genevieve, Mo.  
 Meyer, A. G., Ste. Genevieve, Mo.  
 Moore, C., St. Marys, Mo.  
 Morgansteen, H. J., Weingarten, Mo.  
 Rutledge, G. M., Ste. Genevieve, Mo.  
 Shirley, J. M., St. Marys, Mo.  
 Wilkins, J. A., St. Marys, Mo.

## ST. LOUIS COUNTY.

Armstrong, C. L., Webster Groves, Mo.  
 Armstrong, John H., Kirkwood, Mo.  
 Baker, M., Webster Groves, Mo.  
 Berry, J. M., Webster Grove, Mo.  
 Bracy, Rolla, Wellston, Mo.  
 Brossard, P. M., Maplewood, Mo.  
 Cape, L. W., Maplewood, Mo.  
 Carter, H., Webster Groves, Mo.  
 Coleman, H. T., Pattonville, Mo.  
 Dalton, M., Fenton, Mo.  
 Denny, R. B., Eureka, Mo.  
 Douglass, J. T., Ferguson, Mo.  
 Dunnavant, C. A., Kirkwood, Mo.  
 Forsyth, R. C., Kirkwood, Mo.  
 Gallagher, J. C., Valley Park, Mo.  
 Greensfelder, H., Kirkwood, Mo.



Guibor, F. E., Maplewood, Mo.  
 Higgins, R. M., Kirkwood, Mo.  
 Jensen, N. N., Florissant, Mo.  
 Knabb, F. P., Valley Park, Mo.  
 Koch, O. W., Ballwin, Mo.  
 Loving, S. R., Centaur, Mo., R. F. D. No. 22  
 Lucas, H. T., Bridgeton, Mo.  
 Maisch, Aug., Manchester, Mo.  
 Metcalf, N. E., Maplewood, Mo.  
 Miles, H., Webster Groves, Mo.  
 Mills, R. W., Webster Groves, Mo.  
 Moore, R. D., Central, Mo.  
 O'Brien, L. F., Sappington, Mo.  
 Pfister, J. D., Creve Coeur, Mo.  
 Pitman, John, Kirkwood, Mo.  
 Randle, H. T., Clayton, Mo.  
 Reynolds, S. H., Maplewood, Mo.  
 Thurman, E. J., Fenton, Mo.  
 Townsend, W. H., Maplewood, Mo.  
 Will, S. J., Jefferson Barracks, Mo.  
 Wyer, H. G., Kirkwood, Mo.  
 Zuppann, Chas, Ballwin, Mo.

## ST. LOUIS MEDICAL SOCIETY.

(All addresses St. Louis, Mo.)

Abeken, F. W., 3531 S. Broadway.  
 Albrecht, F. H., 3763 Westminster Pl.  
 Allison, Nathaniel, Linmar Bldg.  
 Alt, A., 3036 Locust St.  
 Althaus, Carl, 2024 S. Jefferson.  
 Ambrose, A. O., 313 N. Ninth St.  
 Amos, N. W., 3001 Olive St.  
 Amyx, R. F., 1943 N. Eleventh St.  
 Amerland, J. H., 2739 Chippewa St.  
 Apperson, E. L., Linmar Bldg.  
 Appleberry, D., Tamm and Clayton Road.  
 Atkinson, R. C., 3002 Lafayette Ave.  
 Atkins, H. S., Insane Asylum.  
 Aufderheide, W. D., 2754 Arsenal St.  
 Auler, H. A., 2708 Lynch St.  
 Ayars, T. R., 3901 Easton Ave.  
 Babler, E. A., 617 Euclid Ave.  
 Bailey, F. W., 1611 California Ave.  
 Baker, R. W., 4233 Olive St.  
 Ball, J. M., 3509 Franklin Ave.  
 Ball, O. F., Linmar Bldg.  
 Barck, C., Humboldt Bldg.  
 Barclay, R., 3894 Washington Ave.  
 Barnes, A. S., 5434 Maple Ave.  
 Barnes, A. S., Jr., Mo. Trust Bldg.  
 Barnes, P. C., 2931 Easton Ave.  
 Barnes, P. L., 5434 Maple Ave.  
 Barnes, R. H., 412 Sarah St.  
 Baron, Jules, 4900 Berlin Ave.  
 Barrington, R. L., 5658 Cates Ave.  
 Bartenheier, F. G., City Hospital.  
 Bartlett, Willard, 4257 Washington Ave.  
 Bartscher, H. W., 829 Bremen Ave.  
 Bauer, C. E., 2104 N. Fourteenth St.  
 Baumgarten, G., Humboldt Bldg.  
 Baumgarten, Walter, Humboldt Bldg.  
 Baumgartner, C., 2108 Russell Ave.  
 Becker, W. H., 4743 Labadie Ave.  
 Beckham, G. S., 5110 Page Blvd.  
 Bedal, A. C., 3418 Lucas Ave.  
 Behrens, L. H., 5 S. Broadway.  
 Benson, B. G., 2136 Denton St.  
 Bennett, Floyd W., 2828 St. Vincent Ave.  
 Birdman, F. H., City Hospital.  
 Bishop, F. L., 516 N. Garrison Ave.  
 Black, W. D., 1411 California Ave.  
 Blair, V. P., Linmar Bldg.  
 Blatner, F. O., 233 S. Jefferson.  
 Bliss, M. A., Humboldt Bldg.  
 Bock, A. F., 1107 N. Grand Ave.  
 Boehm, Jos. L., 3806 Delmar Ave.  
 Boemler, Geo., 1922 St. Louis, Ave.  
 Boggs, J. D., 813 N. 18th St.  
 Bond, Y. H., 315 N. Grand Ave.  
 Bond, H. W., Old City Hall.  
 Boogher, J. L., Missouri Trust Bldg.  
 Booth, D. S., Linmar Bldg.  
 Botts, McDowell, Frisco Hospital.  
 Brädley, A. H., 1019 N. Twenty-first St.  
 Bradley, J. M., 2329 Montgomery Pl.  
 Bradley, J. M.  
 Brandenburger, L. A., 2900 Eads Ave.  
 Brady, J. M., 1467 Union Blvd.  
 Breed, Maurice E., 1018 Hamilton Ave.  
 Bribach, Benno, 7608 Michigan Ave.  
 Broderick, J. K., Hotel Beers.  
 Brooks, H. S., 3557 Lafayette Ave.  
 Broome, G. W., 619 N. Kingshighway.  
 Brown, A. C. F., 3200 Olive.  
 Brown, J. Y., City Hospital.  
 Brown, O. H., Grand & Caroline Sts.  
 Bryan, R. S., Humboldt Bldg.  
 Bryan, W. M. C., 3858 Westminster Pl.  
 Buchanan, J. M., 721 N. Kingshighway.  
 Buckwalter, J. C., Century Bldg.  
 Buhman, R., 5264 Page Ave.  
 Burford, J. C., 932 Hamilton Ave.  
 Burnett, E. C., Century Bldg.  
 Burnett, D. C., 2602 N. Taylor Ave.  
 Burns, R., 4500 Olive St.  
 Butler, L. P., Maryland & Euclid.  
 Byrd, E., 1000 Bitner St.  
 Cadwallader, I. H., 919 N. Taylor Ave.  
 Cale, G. W., 12 Lenox Pl.  
 Calnane, J. A., 1407 N. Grand.  
 Campbell, A. V., 4631 Westminster Pl.  
 Campbell, G., 3429 Morgan Ave.  
 Cape, L. W., Sutton & Hazel.  
 Caplan, L., Lister Bldg.  
 Carley, H. D., 3419 Bell Ave.  
 Carman, R. D., 4419 Olive St.  
 Carson, G. W., 301 Century Bldg.  
 Chaddock, C. G., 3750 Lindell Bl.  
 Charles, Jos. W., Humboldt Bldg.  
 Clarke, B. W., Vanol Bldg.  
 Clark, S. E., 2835 Morgan.  
 Clemens, James R., 3720 Pine.  
 Clopton, M. B., Humboldt Bldg.  
 Colassowitz, A., Olivia Bldg.  
 Connolly, P. D., 2556 N. Grand Ave.  
 Constantine, M. F. K., 2429 Warne Ave.  
 Cook, G. E., 1739 N. 9th St.  
 Crandall, G. C., 4287 Olive St.  
 Creveling, H. C., Humboldt Bldg.  
 Crossen, H. S., 4477 Delmar Ave.  
 Cummings, H. J., 1200 N. Grand Ave.  
 Dalton, H. C., 3536 Easton Ave.  
 Dames, A. F., Easton & Goodfellow.  
 Davis, L. H., 1017 Park Ave.  
 Davis, Robert H., Lister Bldg.  
 Davis, W., Academy & Page.  
 Dean, J. M., 319 N. Grand Ave.  
 Deutsch, W. S., 3135 Washington Ave.  
 Dickerson, W. L., 5424 Easton Ave.  
 Dixon, C. H., Lister Bldg.  
 Dorsett, E. Lee, City Hospital.  
 Dorsett, Walter B., Linmar Bldg.  
 Dorsey, B. L., 1422 N. Taylor Ave.  
 Doyle, W. J., City Hospital.  
 Drake, Geo. S., Jr., Humboldt Bldg.  
 Drescher, F. B., 3926 S. Broadway.  
 Duncan, J. H., Humboldt Bldg.  
 Dutzi, August, 325 Souard St.  
 Eberlein, E. W., 1208 Dillon St.  
 Ehrenfest, H., Vanol Bldg.  
 Eidmann, W. P., 3160 Morganford Road.  
 Elbrecht, O. H., Female Hospital.  
 Elmer, W. P., 612 N. Taylor Ave.  
 Engclbach, Wm., Humboldt Bldg.  
 Engman, M. F., Humboldt Bldg.  
 Epstein, M. I., 1905 N. Eleventh St.  
 Erhardt, R. T., 313 N. 9th St.  
 Ewing, A. E., 5956 Cabanne Ave.  
 Ewing, F. C., Century Bldg.  
 Eyerman, E. H., 1800 S. Broadway.  
 Fahlen, Fred, Humboldt Bldg.  
 Falk, J. C., 2701 Stoddard St.  
 Fienup, T. F., 3218 Lafayette Ave.  
 Fisher, J. A., 5924½ Easton Ave.  
 Fisch, C., 3212 Pine St.  
 Fischel, W. E., Humboldt Bldg.  
 Fischer, W. E., Linmar Bldg.  
 Fleming, A. W., 4130 Manchester Road.  
 Forster, O. E., Carleton Bldg.  
 Forster, Davis, 5249 Raymond Ave.  
 Fowler, C. E., 8036 N. Broadway.  
 Fowler, S. R., Carleton Bldg.  
 Frankenthal, M., 4163 McPherson Ave.  
 French, Pinckney, Mo. Lincoln Trust Co.  
 Freudenstein, W. H., 2826 Clark Ave.  
 Freund, Newton M., 1440 S. 18th St.  
 Freeland, H. L.  
 Friedman, J., 308 N. Sixth St.  
 Frielingsdorf, E. H., 2202 S. Broadway.  
 Fries, W. A., 1544 S. Broadway.

- Fry, F. R., Humboldt Bldg.  
 Fuchs, W. H., Lafayette & Compton Ave.  
 Fuhrmann, R. H., 3221 California Ave.  
 Fulton, A. L., 2656 Russell Ave.  
 Funkhouser, R. M., 4354 Olive St.  
 Furney, E. E., 3417 Morgan St.  
 Gamble, D. C., 37 Portland Pl.  
 Garstang, D. B., Linmar Bldg.  
 Gauen, G. A., 1518 N. Grand Ave.  
 Geitz, H. A., Humboldt Bldg.  
 Gellhorn, Geo., Linmar Bldg.  
 Gettys, S. L., Linmar Bldg.  
 Gettys, H., Missouri Trust Bldg.  
 Glasgow, F. A., 3894 Washington Ave.  
 Glennon, W. P., 319 N. Grand Ave.  
 Goawl, H. P., 3353 Nebraska, Ave.  
 Godfrey, Geo. B., 3933 Nebraska Ave.  
 Goldstein, M. A., 3858 Westminster Pl.  
 Goodloe, H., Vanol Bldg.  
 Goodman, D. C., Lister Bldg.  
 Goodwin, E. J., Linmar Bldg.  
 Gorden, F. N., 1542 Mississippi Ave.  
 Gorin, Geo. M., 4225 W. Belle.  
 Gradwohl, R. B. H., 5269 Vernon Ave.  
 Graham, I. E., 1417 Newstead Ave.  
 Grant, J. M., 4132 Easton Ave.  
 Gaul, R. E., 2905 Cherokee St.  
 Graves, Spencer C., Lister Bldg.  
 Graves, Wm. W., Vanol Bldg.  
 Gray, Isabell, 3016A S. Grand Ave.  
 Green, John Jr., Vanol Bldg.  
 Greer, E. O., 2750 Park Ave.  
 Greiner, Theo., 5534 Easton Ave.  
 Gregg, A. M.  
 Griffin, F. H., 4504 Easton Ave.  
 Grindon, Joseph, 3894 Washington Ave.  
 Gross, J. H., 306 Oriol Bldg.  
 Grosse, L. W., City Hospital.  
 Grote, W. F. H., 2705 N. Fourteenth St.  
 Guggenheim, Louis, L., City Hospital.  
 Guhman, J. O., 4531 Washington Ave.  
 Guhman, M. J., 3505 N. Twenty-sixth St.  
 Gulman, Chas. N.  
 Gundlach, A., 2202 University St.  
 Haase, M. E., 1105 S. Seventh St.  
 Habermaas, A., 3817 Cleveland Ave.  
 Hall, W. A., 1556 Tower Grove.  
 Hall, Willis, Humboldt Bldg.  
 Hall, H. R., 925 Goodfellow Ave.  
 Hallam, J. C., Mermod & Jaccard Bldg.  
 Hardaway, W. A., Lister Bldg.  
 Hardy, Joseph A., 7620 S. Broadway.  
 Harmann, M., 3441 N. Ninth St.  
 Harnisch, H. D., 2407 S. Eighteenth St.  
 Hardy, W. F., 2302 S. Jefferson.  
 Harris, D. L., 5001 Morgan St.  
 Harrol, W. E., 6201 Etzel Ave.  
 Hartmann, Jacob A., 1220 Hickory St.  
 Hartwig, O. A., 927 Market St.  
 Hauck, E. F., 1638 S. Twenty-sixth St.  
 Hauck, L., 903 Morrison Ave.  
 Hawley, N. J., Century Bldg.  
 Hawley, T. S., 3065 Easton Ave.  
 Helwig, H. J., 2804 Manchester.  
 Hempelmann, L. H., 1107 N. Grand Ave.  
 Henderson, F. L., Humboldt Bldg.  
 Henke, A. F., 2210 Howard St.  
 Hennerich, J. P., 2921 S. Broadway.  
 Henske, A. A., 1504 St. Louis Ave.  
 Herchenroeder, L. C., 2904 Park Ave.  
 Hermann, H. W., 1127 N. Grand Ave.  
 Heuer, Phil H., Humboldt Bldg.  
 Heyer, C., 910 N. Tenth St.  
 Hill, Roland, 4605 Delmar Ave.  
 Hirschi, W. T., 2217 N. Grand Ave.  
 Hoefler, J. P., 2304 S. Compton Ave.  
 Hoffman, P., 3337 Washington Ave.  
 Hoge, M. W., Linmar Bldg.  
 Hogebsen, R. W., Frisco Bldg.  
 Holt, Chas. S., 627 Century Bldg.  
 Holman, R. S., 3951 Delmar Ave.  
 Holtgrewe, F. W., 1601 Blair Ave.  
 Holt, E. E., 1532 Franklin Ave.  
 Homan, G., Odd Fellows' Bldg.  
 Hopkins, T. A., Century Bldg.  
 Hopkins, Roos, 5917 Maple Ave.  
 Horwitz, M. R., 3000 Olive St.  
 Houwink, J. J., 902 Bayard Ave.  
 Howard, O. L., 4213 Nat. Bridge Road.  
 Huber, Julius B., 2752 Chippewa St.  
 Hughes, C. H., 3872 Washington Ave.  
 Hughes, H. S., 2937 St. Vincent Ave.  
 Hughes, Mark Ray, 3872 Washington Ave.  
 Hypes, B. M., 2005 Victor St.  
 Jacobson, H., Mo. Trust Bldg.  
 James, J. A. J., Carleton Bldg.  
 Jennings, J. E., Carleton Bldg.  
 Jennings, M. D., 4101 Washington Ave.  
 Johnson, E. H., 2507 N. Spring Ave.  
 Johnson, F. P., 3744 Finney Ave.  
 Johnson, H. McC., Linmar Bldg.  
 Jonas, E., 4474 Westminster Pl.  
 Jones, M. D., 4068 Washington Ave.  
 Jude, J. J., 2521 S. Broadway.  
 Jungk, C. G. W., 536 N. Taylor.  
 Kane, R. E., 1123 N. Grand Ave.  
 Keber, J. B., 448 Century Bldg.  
 Keeble, R. R., 2747 Lafayette Ave.  
 Keeln, G. A., 2702 N. Grand Ave.  
 Kennedy, W. U., 1121 Cass Ave.  
 Kern, B. C.  
 Kern, J. H., 1317 Madison St.  
 Kessler, E. H., 3446 Shenandoah Ave.  
 Kieffer, A. R., 4268 W. Belle Pl.  
 Kier, W. F., 3609 Lindell Bl.  
 Kimball, A. C., Grand & Franklin Ave.  
 Kimbrough, John S., Humboldt Bldg.  
 Kirchner, W. C. G., 1211 N. Grand Ave.  
 Klokke, Wm. E., 1316 Mississippi Ave.  
 Klie, G. H. C., 5100 N. Broadway.  
 Klienfelter, M. L., 536 N. Taylor.  
 Klenk, C. L., 2105 S. Broadway.  
 Koch, J. V., City Hospital.  
 Koenig, G. W., 740 S. Fourth St.  
 Koetter, A. P., A. F., 1023 N. Grand.  
 Koontz, C. J., 4551 Delmar.  
 Krebs, G. A., 2709 S. 11th St.  
 Krebs, F. J. V., 1906 St. Louis Ave.  
 Krenning, W. G., 4041A St. Louis Ave.  
 Kroeger, G. B., 3622 Garfield.  
 Krug, F. H., 2506 N. 15th St.  
 Kuhlman, F. C. E., 2135 St. Louis Ave.  
 Kuhn, D., 1746 Chouteau Ave.  
 Kurtzeborn E.  
 Laidley, L. H., 308 N. Sixth St.  
 Langan, W. J., Plymouth & Goodfellow.  
 Larew, J. L., Olivia Bldg.  
 Lawrence, W. S., 1913 N. Grand Ave.  
 Lemen, J. R., Vanol Bldg.  
 Leighton, W., 926 Academy Ave.  
 Lewis, Bransford, 627 Century Bldg.  
 Levy, A., Lister Bldg.  
 Lightner, C. R., 2313 Washington Ave.  
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 Link, J. J., Mermod & Jaccard Bldg.  
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 Harris, J. E., Marshall, Mo.  
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 Manning, D. T., Marshall, Mo.  
 Richart, G. A., Blackburn, Mo.  
 Shuck, L. J., Nelson, Mo.  
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 Whittington, W. L., Marshall, Mo.

#### SCHUYLER COUNTY.

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 Gerwig, H. E., Downing, Mo.  
 Jones, J. T., Queen City, Mo.  
 Justice, W. H., Lancaster, Mo.  
 Justice, W. F., Lancaster, Mo.  
 Mitchell, E. L., Lancaster, Mo.  
 Mitchell, W. F., Lancaster, Mo.  
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 Rambo, J. H., Glenwood, Mo.  
 Zeher, W. H., Queen City, Mo.

#### SCOTT COUNTY.

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 Cannon, G. S., Farnfelt, Mo.  
 Cline, J. L., Vanduser, Mo.  
 Frazer, T. F., Commerce, Mo.  
 Frazer, T. R., Commerce, Mo.  
 Harris, W. E., Oran, Mo.  
 Haw, U. P., Benton, Mo.  
 Hutton, W. S., Farnfelt, Mo.  
 Lucas, H. R., Coffee, Mo.  
 McCabe, R. S., Chaffee, Mo.  
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 Sparks, R. A., Blodgett, Mo.  
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#### SCOTLAND COUNTY.

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 Maynard, G. K., Hitt, Mo.  
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 Smith, J. D., Shelby, Mo.

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#### STONE COUNTY.

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 Poole, A. R., Milan, Mo.  
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 Reid, E. W., Humphreys, Mo.  
 Roberts, J. C., Boynton, Mo.  
 Roberts, J. M., Green City, Mo.  
 Shepler, R. H., Mystic, Mo.  
 Shriver, C. F., Harris, Mo.  
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 Craig, T. B. M., Nevada, Mo.  
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 Johnson, S. A., Nevada, Mo.  
 McLemore, T., Nevada, Mo.  
 Todd, T. B., Richards, Mo.  
 Truex, J. L., Milo, Mo.  
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 Williams, V. O., Nevada, Mo.  
 Yater, J. M., Nevada, Mo.

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 Foreman, C. O., Warrenton, Mo.  
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#### WAYNE COUNTY.

No Report Received.

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 Rabenan, W. J., Fordland, Mo.  
 Trimble, Eli, Seymour, Mo.

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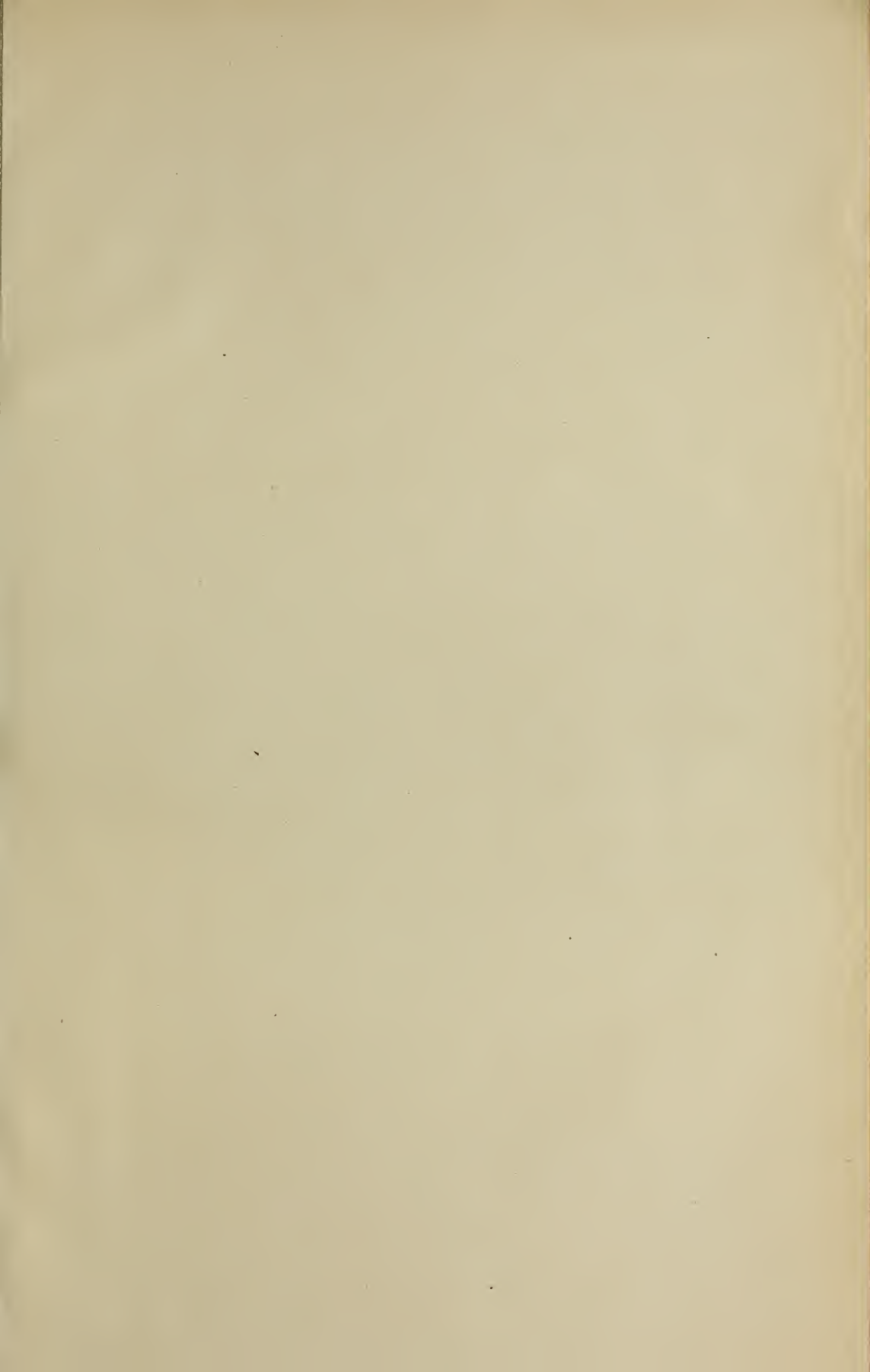
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